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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

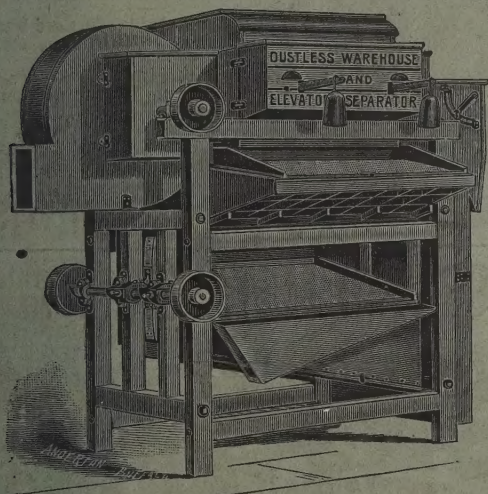
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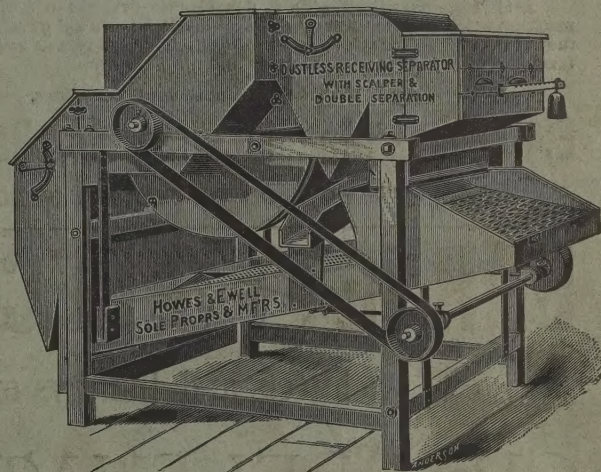
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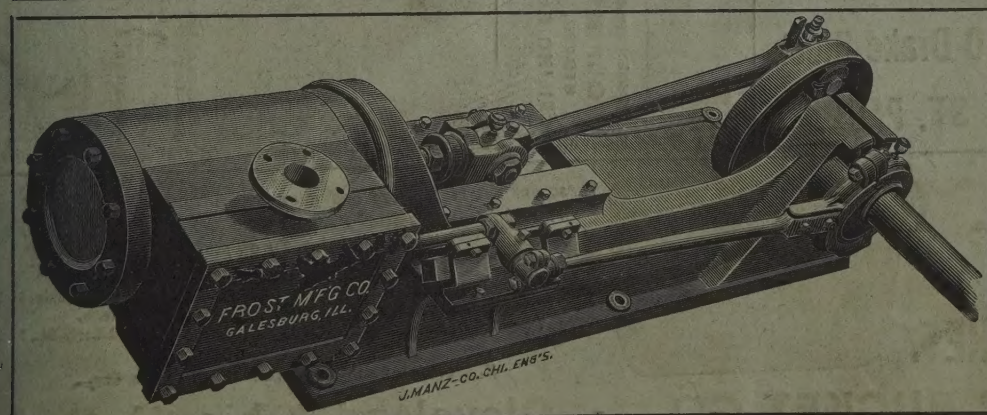
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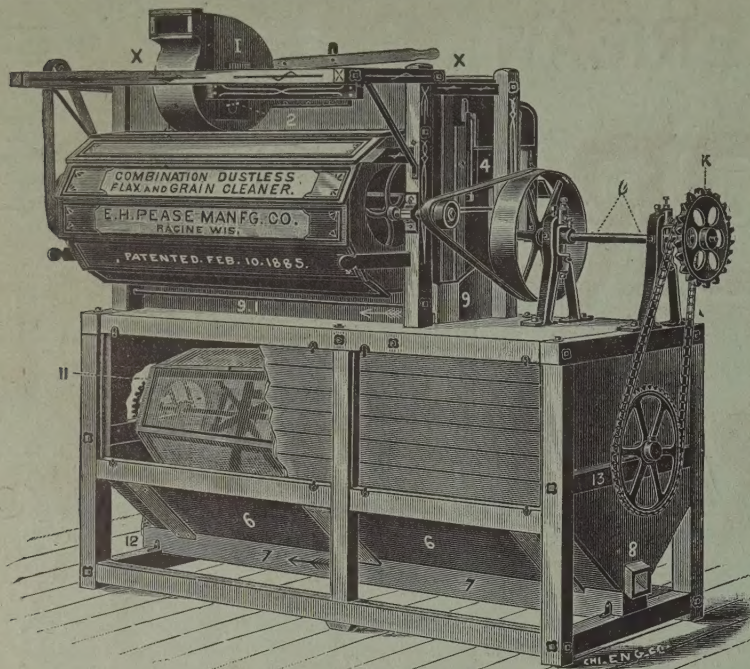
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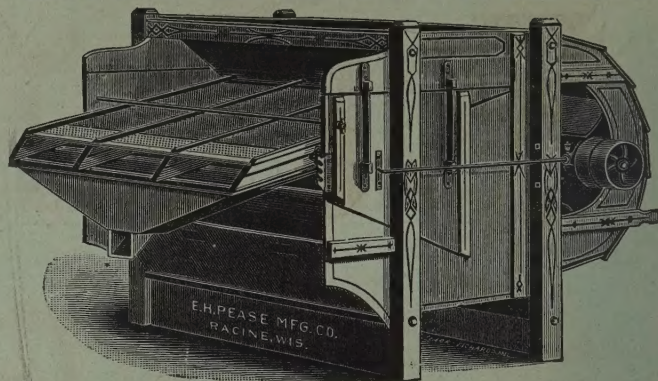
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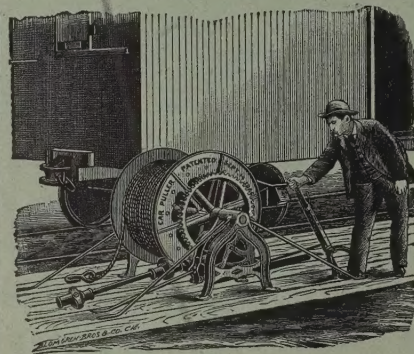
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WEST SUPERIOR ELEVATORS.

We present in this issue an illustration of the Sawyer system of elevators at West Superior. This city which has attained to such wonderful proportions in the short space of four years, is the eastern terminus of the great system of the St. Paul, Minneapolis & Manitoba Railroad. It was founded by the Land & River Improvement Company, which has pursued a liberal policy in its development and the promotion of its best interests. This company has united with itself the Lake Superior Terminal and Transfer Railroad Company, which has added many improvements to the transportation facilities, especially in the way of handling and transferring freight. These facilities have greatly aided in building up the important elevator business of West Superior, which in a few years will perhaps become one of the largest in the United States.

In 1886 the St. Paul, Minneapolis & Manitoba Railway Company built at this point the Great Northern Elevator with a capacity of 1,900,000 bushels of wheat. In the spring of 1887 the Sawyer system of elevators was begun, and five months were occupied in their construction. The buildings have a total length of about 2,000 feet, and cost \$2,000,000. Their total capacity is 5,000,000 bushels. A large proportion of the wheat in them is owned by Chicago dealers, who can insure cheaper here than at home. The Omaha Railroad Company are about to build docks at these elevators to cost \$150,000, and the Manitoba Company will build equally expensive ones at the Great Northern Elevator.

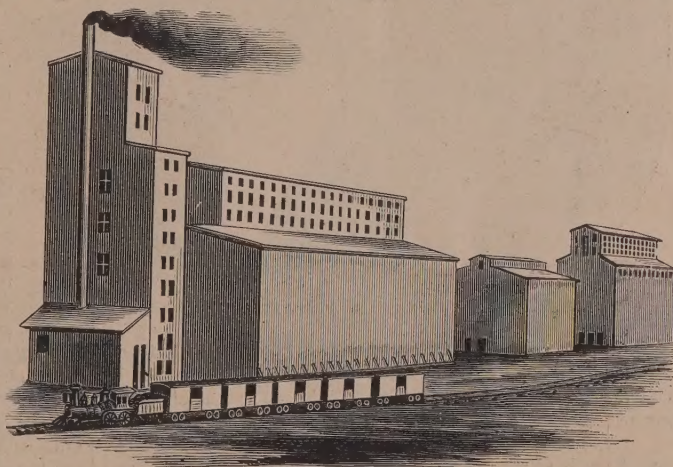
The latter elevator is claimed to be the largest single elevator in America, probably in the world, and the Sawyer system of elevators the largest system in this country under one management. A vessel can be loaded with 40,000 bushels of wheat in about four hours' time at either of these elevators, thus saving many hours of the time required at other places for the same work.

It is estimated that there will be shipped through the West Superior elevators during 1888 more wheat than passes through Detroit in a year. Five railroads are kept busy in taking care of the grain business and other freight business of this city. The Manitoba owns a large elevator here, and is now building another and two large docks. The Northern Elevator Company is also building another elevator which will equal the present one in size.

The immense iron interests of West Superior, its large grain trade, its unsurpassed location and facilities for commerce, all point to a brilliant future for this enterprising Wisconsin town.

SOME INVENTIONS IN GRAIN HANDLING.

It is to Joseph Dart of Buffalo that the world owes the invention of the modern grain elevator. It was in this city that the first practical success in handling grain by machinery for commercial purposes was attained. Up to 1841 all grain was transferred from vessels to canal-boats and warehouses in sacks borne by men. Some of the old steel-engraved vignettes in the banking department at Albany illustrate this former method very clearly. At most, ten or fifteen bushels of grain were weighed at a time, and the largest quantity that could be trans-



THE SAWYER SYSTEM OF ELEVATORS AT WEST SUPERIOR, WIS.

ferred in a day was 1,800 or 2,000 bushels, and that only when the weather was fair. The harbor was often crowded with vessels waiting for a change of weather. The receipts of grain at that time were about 2,000,000 bushels a year, about a fiftieth of what is received nowadays at this port, and therefore the need of greater facilities was not so urgent. But in the year 1841 Mr. Dart determined to try steam power in the transmission of grain, and proceeded in the autumn of 1842 to build on Buffalo Creek, at the junction of the Evans Ship Canal, on the site of the present Bennett elevator. This was the first steam transfer and storage elevator in the world. The experiment from the first working was a decided and acknowledged success. By this elevator from 1,800 to 2,000 bushels an hour was transferred, and by the same elevator, a few years later, after the introduction of improvements, 6,000 to 7,000 bushels an hour, weighing it correctly. And while in 1841 it was possible to transfer at most only 2,000 bushels of grain a day, it is now an

easy matter for the Buffalo elevators to transfer 4,000,000 bushels a day. It is needless to expatiate on the importance of this invention to American agriculture and commerce. The evidences of it are before our eyes. Joseph Dart died in 1879, but his works live after him and will serve to perpetuate his memory for ages to come.

In this connection it may be mentioned, too, that the floating elevator is the invention of another Buffalonian, A. R. Nims. Early in the 'sixties he was one day sitting on the pier fishing, when, casting his eyes along the shore where the huge elevators loomed up, he was struck with the idea that a more economical method of elevating grain from vessels might be devised. It occurred to him

that a floating elevator might be constructed at far less cost, which would accomplish the same result in a more economical manner. He had never up to that time been inside an elevator, and he knew nothing of its machinery or gearing. He went home and during intervals of leisure made a model after his ideas. He thought, however, that it was hardly practicable, and let it lie in his shop until one day a friend came in and picked it up. Mr. Nims explained it, and his friend was so struck with its ingenuity and value that he helped the inventor get it patented, and, taking a financial interest in it, brought it into notice and favor. In New York floating elevators are now as indispensable as those ashore, and Mr. Nims, who also invented the wrought-iron elevator leg, deserves a page in America's biographical encyclopedia of inventors.

Nor in this connection should it be forgotten that three citizens of credit and renown invented the steam grain shovel. Their names were Wilson, Spindelw and Watson. Their

device was patented in 1864. For shoveling by men it substituted huge shovels worked by pulleys, scooping up several bushels at once. It met with such opposition from the grain shovellers that none of the elevators would use it, and the invention lay dormant for twelve years. It was then tried by the proprietor of the Niagara elevator, and after awhile it was introduced into the rest. Shoveling by hand 4,000 bushels an hour was a large average. With the steam shovel 8,000 to 10,000 bushels could be handled in the same time, and with two elevator legs at work, twice that quantity. The steam grain shovel has become an indispensable factor in the unloading of vessels.—*Buffalo Courier.*

The average yield of wheat in Minnesota last year was 11.6 per acre, and in Dakota 14.3. Some pieces in Dakota exceeded 40 bushels. Careful cultivation in the old world produces much larger averages. It is stated that in Roumania the average last year was 28 bushels.

THE LATE A. P. DICKEY.

We take pleasure in presenting to our readers an excellent portrait of the late A. P. Dickey, together with a representation of the shops of the company of which he was the founder. The A. P. Dickey Manufacturing Company was first established at Chicago in 1839, but the place at that time not being considered healthy, the shops were removed to Racine, Wis., where the business has steadily grown and its productions acquired a widespread reputation. Among the many valuable machines made by them, grain men are specially interested in the Dustless Grain Separators.

BUILDING OF ELEVATORS.

SECOND PAPER.

BY R. JAMES ABERNATHEY.

Continuing the description of the little elevator we had in hand last month, we will now try to provide for the driveway and methods of getting the grain into it. The height of the driveway will depend upon the depth of foundation and elevator pit, which in turn depend upon the lay of the ground and its condition. If the water comes to or near the surface, there can be but a very shallow general basement. If not troubled with water at all, the basement or pit can be sunk to any desired depth in such a manner as will probably be hereafter described.

Assuming that the basement and pit can be sunk to the depth stated in the last paper, we will make the floor of the driveway eight feet above grade or track level. That is not very high when allowing the surface of the ground to correspond with the face of the track, and when standing above the track, as is often the case even in level localities, it makes the driveway very easy of approach. But in any event we need about the space that such a height of driveway would give us between it and bottom of elevator pit, and must have it if at all practicable to get. We need it for dump room. The width of driveway should be at least ten feet in the clear, that is, between the walls of the main building and side posts of driveway.

A light wall, running say a foot above ground, can be built along the outside of the driveway on which the posts for the latter can rest, or small piers can be built for each post. The top of the posts should be about eleven feet above the floor. One foot below the surface of the floor cross ties 8x10 should be framed into the posts and in a like manner, or in some other way securely fastened to the side of building, thus tying the two together. On the ties lay 2x10 joists, and floor over with two-inch plank of any convenient width. Two-inch plank are necessary on account of the rapid wear due to the tramping of horses and roll of wagon wheels under heavy loads of grain. The flooring need not be dressed, as in a rough state it answers just as well, if not better. The posts should be 8x8, and there should be four of them for the sized house we are now describing.

Beneath the floor of the driveway must be constructed the dump hopper for receiving the grain from wagons and delivering it to the elevator. About 2x6 scantling can be used for sustaining the lining or flooring of the hopper. Commencing at the boot of the elevator, these scantlings must be radiated in such a manner as will support the flooring and its load of grain. It is scarcely possible to detail the exact method of doing it with a pen sketch, but to those familiar with such work the method will suggest itself. The grain must all be gathered at one point so as to empty into the boot of the elevator. The pitch of the bottom of the hopper should be about 45 degrees, so as to allow the corners to run freely and clear themselves of grain.

For sustaining the outer ends of the scantlings, or hopper joists, ties should be framed into the posts at whatever point is required to give the proper pitch. A suitable support should be supplied at the elevator boot to sustain that part of the hopping independent of the boot itself, which should bear no part of the weight and be connected only by a short spout. A partition in the center should divide the hopper into two parts, so that any two kinds of grain may be unloaded at the same

time. In that way if two farmers came in, one loaded with wheat and the other corn, for instance, both can be promptly unloaded in succession the same as if both were loaded with the same kind of grain. To do that a dump must be provided and placed about centrally in the floor of driveway. To learn how to do that, the builders of the elevator had better apply to some of the alleged owners of dump patents for dump irons and instructions, otherwise they are liable to be bothered with claim agents demanding royalty, which is figured at about the same price that the irons and royalty both cost if regularly bought in the first place.

However the dump may be obtained, locate it so that the wagon can be emptied into either one of the two hoppers. Have the trap door directly over the partition wall of the double hopper. That part of the partition immediately under the trap must have a flap-valve linged below that can be thrown either way, thus closing one side of dump hopper and opening the other at will. Then if the first team on the scale is loaded with wheat, it can go forward and be unloaded into the wheat side of the hop-



THE LATE A. P. DICKEY.

per. The next, if loaded with corn, can quickly follow and be unloaded into the other side of the hopper by simply throwing the valve.

If more than two kinds of grain are being delivered at the same time, delays in unloading will be unavoidable, as in so small a house no more dump room can be provided than we have allowed. The third kind of grain will have to wait until one of the dump hoppers can be emptied by elevating and putting the grain in the building before it can be unloaded. It will, of course, be understood that the elevator must be kept running all the time, first drawing from one side of the dump and then the other, in order to keep the grain out of the way, as we are only providing one stand of elevators to do that work in this house.

A very cheap method of adding to the storage capacity of the building, and also a convenient way of taking care of certain kinds of grain, is to put a crib-like attachment on the outside of the driveway and running the full length of it. It may be made, say, ten feet wide, wider if desired, and have the bottom just low enough to shovel the grain into the dump hopper below the driveway floor. Into that attachment the grain would have to be emptied directly from the sacks in wagon while standing on the dump floor, or with a scoop, as the case might be. It is not quite so convenient nor so easy as to dump it, which cannot be done, but it is a very handy attachment to have, and costs but comparatively little in addition to provide

for it. As in this case it would be for loose grain only, it would have to be floored and sided with matched lumber and made tight. There would be no objection to using the same attachment for ear corn in a corn-handling house, and in fact it would be quite proper to do so on occasions when for any reason the house could not run. The dumps could be first filled, and then the farmer required to shovel the corn into the attachment, from which it could be rolled and shoveled into the dump hopper when ready to shell.

While speaking of convenience in handling ear corn, it may as well be added that a regular crib of any desired length and width can be run out at right angles with the driveway, and having a drag belt or conveyor running through the center of it lengthways, which will carry and deliver the corn to the sheller when ready to shell. In every important corn-handling section of country more or less corn is cribbed by elevator men every year, all of which has to be rehandled when the shelling season comes by unloading it out of cribs into wagons and then hauling to the house to be dumped into sheller in the ordinary way. The proposed crib attachment to the house does away with that extra work to the extent of its capacity for holding corn. It is true a portion of the corn lying nearest the bottom of the crib will have to be shoveled into the conveyor, but that requires but little extra work compared with the other. We will probably have something more to say at some future time about this crib attachment and the manner of constructing and operating it.

It is not necessary to enter into an elaborate description of the approaches to the driveway and dump hopper. They are bridge-like structures, and can be put up very rough, though strong. The up or entering approach should have as gentle a slope or incline as the room will permit, while the down end of it may be quite steep. That matter should be kept in view when first locating the house on the lot, if it be small. If there is plenty of ground it will not matter so much. On a small lot set the building well over to the driving-off side, and then circle the driving-off approaches around toward the office and scales, which should be located near the foot of the driving in approach.

So far we have provided in the internal construction of our house for handling small or loose grain only, and will now proceed to suggest the changes necessary for handling ear corn. The difference is not great nor the changes many, but they are important. The pit in the basement must be enlarged and deepened. Instead of being eight feet square, it must now be ten feet in the clear and run two feet nearer the dump. We will also be obliged to make it at least eight feet deep, instead of only four feet deep, as described in our last. If troubled with surface or spring water, it will be much better to wall it with brick and the best of cement, making a thoroughly strong

and water-tight job. The bottom should be covered with heavy plank before any walls are laid. Build the side walls on the plank and cover the plank with a heavy layer of water-tight concrete. It would not be safe to brick and cement the bottom without first laying the plank, as the water pressure would probably bulge it up and break through, and with the plank brick are not needed, as good concrete will answer all purposes.

It is necessary to have the increased size of pit, because the corn sheller will have to sit down in it, and also the increased depth, because the sheller stands between the lower point of dump hopper and the boot of the elevator, taking that much off of the fall as we before had it. Hence, in order to retain the depth and pitch of the dump hopper, we must sink the pit deeper, or go higher with the driveway, and that should be avoided if possible. If, however, it be deemed impracticable to sink the pit so deep, then the driveway must be raised higher, the guide being to have twenty feet between the bottom of the pit and surface of driveway floor. A little less than that can be made to answer, but we want that if obtainable. The cupola must not be less than twelve feet wide in the clear, as we must have the corn cleaner up there, and need room to get around and have everything convenient.

With these changes the house may be considered ready for the machinery, which we will proceed in detail to put in in our next paper.

TRADE IN THE SOUTHWEST.

KANSAS CITY, Mo., June 10.

As the season advances there are evidences of more and more life among the elevator men of this city. All the elevators are putting on either additions or making liberal repairs, which some of them stood sadly in need of. It now comes to the surface that elevator "A," which it was thought had been closed for all time, will be brought out of its obscurity and take a leading part in handling the grain which will come to this mart the coming summer and fall. The fact is that with anything like a fair crop the elevator capacity of the city will be taxed to the utmost, that is if rustlers from other cities do not turn away from here the grain which naturally should find its market here. I notice that the larger elevator men here propose to take time by the forelock and are even now sending out their envoys contracting for future deliveries. It appears to be the policy of some of the more enterprising of the elevator fraternity to look to new fields for their market of grain. Heretofore a good deal—in fact the greater portion of it has been taken out of the elevators of Kansas City and sent straight to Chicago and other leading grain centers. It is now proposed to seek a greater outlet to New York and the East direct, by way of Savannah. The only trouble now had is to get the railroads which run through the country to that point to make such concessions in rates that grain men will find it to their advantage to ship such long distances.

Talking with one of the most prominent of these men a few days ago, he declared that he believed the railroads leading to the South would do all they could to foster the movement. Heretofore the Northern roads have almost entirely monopolized this trade, and it was thought that rates to Savannah and from thence by sea to New York or foreign ports could be made so that grain would turn that way to the satisfaction of all parties directly concerned. It seems that the Southern roads are bringing a good deal of lumber and cotton from the South and are obliged in many cases to send their cars back empty. Of course this entails a loss. The idea is to so modify shipments from Kansas City to the South that they will equalize as nearly as possible those to the North. It is only when this is consummated that railroads can hope to pay the best dividends.

All sorts of promises are being made about the inspection of grain at this city. It will be remembered that the countryman has complained that the system of inspection in Kansas City did not allow him the fullest prices for his grain consigned here—that it was detrimental to his interests to ship here. Rather than do so he would very often put his grain directly upon the Chicago or St. Louis market, where he thought he could do better. Whether he did do better or not may always be a mooted question, but the fact that they continued to ignore Kansas City naturally had a disastrous effect on local grain trade. Now it is proposed to take the inspection as much as possible out of the hands of the elevator men and have only the very best disinterested talent obtainable. This is certainly the only method which can be carried out with success. It is now proposed to employ a chief inspector at a liberal salary who shall have as many assistants as necessary to promptly do the work necessary. This chief shall have the whole system resting on his shoulders subject to the supervision of a board of directors, a majority of whom shall not be elevator men. To be sure we have a chief inspector now and he does very well, but until it is well known throughout the country that he is not working under the supervision of elevator men he will find that shipments are not nearly as much as they should be from the country. The sooner this plan

is consummated the better it will be for this year's trade. One cares not how excellent the service given by local elevators may be, they look more to the kind of inspection that is given. The confidence of the countryman should be gotten so that he will feel that not only will he be treated as well here as at other points, but in some cases he is liable to be given a more generous policy.

For three years past the grain business of Kansas City has been retrograding. The first two years it was said that this was occasioned by the short crops raised hereabouts. Some of the parties most interested in the movement straightway went to work and compiled figures showing that even in proportion to the lessened crops Kansas City was not getting nearly what she was entitled to. The next party attacked was the miller—the Kansas City miller. It was said that he refused to buy very much of his grain here but preferred to go North for what he used. The local miller on his part said that he would be most happy to buy of local hands, but that after repeated trials he had come to the conclusion that he could not get the kind of grain that would enable him to turn out the best flour. He very decidedly declared that he did not propose to lose what little trade he had by sticking to local grain men from a purely local love for

lic. Besides this the mills should have more capacity—equal to the greatest demand which may be thrown upon them at any time. It is claimed that there are a couple of 400 barrel mills in the city. This is exceedingly doubtful. It is doubtful if any mill in the city could turn out 400 barrels of flour per day without straining the machinery and the employers greatly. If some great improvement is not made in this direction before another year shall have passed away, the chances are that some Northern miller will come to the front and establish a plant here, commensurate with the demand that can be built up for flour.

The Board of Trade building is fast nearing completion and it is an ornament to the city and a monument to the push and energy of those who took the initiative in its construction. Already some of the offices are occupied, and before the summer is over it is thought that the last finishing stroke to the work will have been applied. It is situated most centrally, cable lines from every portion of the city being within a stone's throw of it. So far as fire is concerned, it is built in the most approved style of the art. The architect declares that a party may make ever so intense a fire in any one portion and it will not spread to the rest of the edifice. As an investment for

the stockholders of the Board of Trade it will prove a good one—much better than grain has proven the last three years.

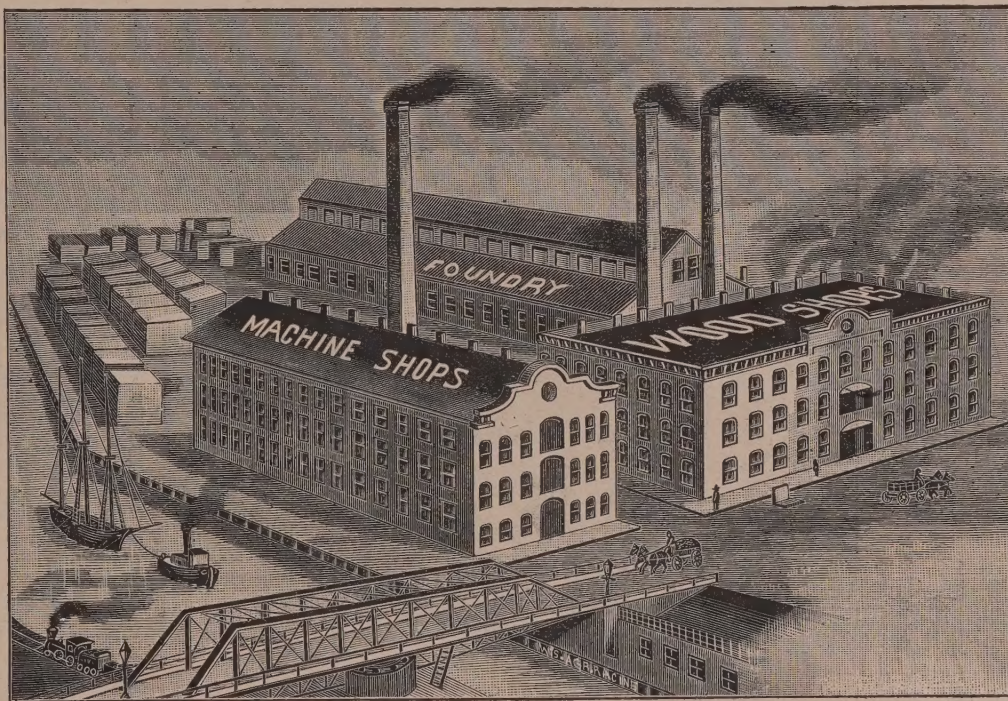
There are about half the number of grain dealers in the city following the business as was the case a couple of years since. However, the old members of houses long since dissolved are waiting about until the rise of trade shall come and then they propose to again tackle the Board. The latest reports from all sections of Kansas and Southern Nebraska and Iowa are very promising. Timely rains have played havoc with chinch bugs and the corn is looking finely. There is plenty of water in the ground to carry it far toward perfection. Of course at this time it is impossible to say what the outcome in the latter cereal may be, but so far as wheat is concerned there is very little doubt expressed.

At present there are 44,

795 bushels of wheat in the elevators, 55,074 bushels of corn, 28,964 bushels of oats and no rye or barley. It will thus be seen that these edifices are about as near empty as they ever get, and it is a good time to bring on the new system of inspection. The grain trade the past month has been unusually dull, and there are not much better prospects for the coming one.

The Iowa farmer objects to giving his note and having it discounted for cash. The latest sharper says, "Oh, we'll keep the note," and he writes across the note, "Not transferable." In a short time it is found in the hands of a third party with an "e" added to the "not," which makes it read, "Note transferable."—*Gilman Dispatch*.

The *American Exporter* says: "The main reasons for the present dullness in the export of American wheat are the enormous shipments of flour made from here during the past winter, the unexampled Russian crop, which is sold chiefly for spring shipment, and the fact that the Australian crop is unusually large this year, and begins to reach England in May or June. These large Russian crops are interfering also with our exports to the Continent of Europe. For example, some ports of France, notably Bordeaux, which never used Russian wheat before, are taking it this year, so that in spite of the lowest possible ocean freights we are, temporarily at least, practically shut out of the European markets. For the last month three-fourths of the export business has been to Portugal. It was reported that higher duties were to be imposed upon wheat entering the ports of that country after the middle of this month, and that report tended naturally to a good export business."



SHOPS OF THE A. P. DICKEY MANUFACTURING COMPANY AT RACINE, WIS.

trade. Finally it was declared that this discrepancy in inspection of grain was purely a myth—that the system here was just as straight and more so than in other portions of the country. However, the declaration of this point did not seem to restore the confidence of the country grain dealer, and still he sent his shipments right through Kansas City to points east and northeast of here.

After all this hedging and recrimination, with nothing accomplished for the good of the city, the elevator men have come to their senses apparently and propose to begin at the bottom as above hinted at and work up the trade as it should be worked. It will take years to do it, but there is no reason why the attempt should not be effectual. Everything is in favor of Kansas City as a central distributing point for wheat and corn. The demand for flour was never greater in tributary sections and it is constantly on the increase. When it is considered that almost one-half of the flour sold here comes from the North, from wheat probably shipped from Kansas, it will be more readily understood that the millers and grain men have a good deal in common in the working out of their own salvation. The mills are not what they should be in a city of this size. While we have good and well-equipped mills, so far as the machinery is concerned, they are, with few exceptions, not run of the push and business order. They are trying to run too much on special brands, for which they think they can create a demand at a price which will pay them more than if they push out the purely merchantable, good-for-all article, which may in the end have a world-wide reputation. Let more flour be sold on the credit of the mill turning out, rather than on some fancy name which for the moment strikes the fancy of the pub-

NEW DRIVING AND SWITCHING GEAR FOR ELEVATOR HEADS.

The accompanying illustration shows a new method of driving the heads of elevators and spouting into twin hoppers, by means of the Metcalf Switch Valve.

On the line shafting is placed a pinion onto which is keyed a friction clutch. This pinion runs the large wheel which gives the proper speed to the head pulley. A rope attached to the clutch handle extends to the floor below, so that the workman on that floor can start and stop the elevator at will by means of this rope. By means of the switch valve, the exact amount of grain desired can be put into either hopper, and is entirely under the control of the weigh-man. This method of driving and the Metcalf Switch Valve have been introduced in a number of elevators, notably in some of the lately-built transfer houses in Chicago. We are indebted for our illustration to the WEBSTER & COMSTOCK MFG. COMPANY, who make the Switch Valve, and who are introducing the method of driving elevator heads described above.

CHICAGO'S GRAIN TRADE.

The Thirtieth Annual Report of the Chicago Board of Trade has been published by the able secretary of that body, Mr. Geo. F. Stone. It makes a bulky volume, of over 400 pages, and is replete with valuable facts, figures and data respecting the trade and commerce of the Garden City. From its interesting pages we make a few extracts.

An incident (related in Gov. Bross' "History of Chicago") which occurred on the 6th day of November, 1834, now seems most improbable. On that date, which is within the lifetime of many now engaged in active business, a large black bear and forty wolves were killed in a strip of timber near the corner of Market and Jackson streets, in close proximity to the present site of the Board of Trade, in the vicinity of which are some of the finest and most costly of our business blocks, and where land is worth from \$2,000 to \$3,000 per front foot.

The population of Chicago in 1840 was 4,853; in 1855, 60,726; to-day it is about 800,000. Its total valuation (for purposes of taxation) in 1857 was \$36,335,281, and in 1887, \$161,204,535.

In 1854 the receipts of flour and grain amounted to 15,725,135 bushels; in 1857, 21,659,109 bushels, and in 1887, 163,437,724 bushels.

The total shipments of flour and grain in 1857 were 18,000,000 bushels; in 1887, 151,658,224 bushels.

The receipts of corn for 1857 were 7,400,130 bushels; in 1887, 50,467,814 bushels.

The total number of hogs, alive and dressed, received for the year 1856-7 was 220,702; in 1887 we received 5,470,852 live hogs; in the month of November last, 735,208; in a single week in 1884 the number received was 300,488.

The receipts of lumber in 1857 were 459,639,189 feet; in 1887, 1,880,168,000 feet.

The total tonnage of vessels which arrived in the district of Chicago in 1857 was 1,753,413; in 1887, 4,421,500.

Multiplication of such contrasts would be bewildering; but an examination of the tables of figures presented in this report must be profoundly impressive. It is not Chicago separately and independently; it is the West, with its thriving people, past and present, of which she is the servant and representative, that has wrought out, under God, the magnificent array of results which the volume contains. Therein we deal in mathematical statements, and arrange, by years and epochs, statistical aggregations as mile-posts and guide-boards, pointing to the beginning of the wonderful way. We should not fail, in such a history, to pay a tribute, if never so briefly, to the men who, by their enterprise, courage, sagacity, and indomitable will, by their virtue, love of learning and Christianity, have made these results possible, and have built up this Western civilization, with its commerce, its schools, its churches, its charities, and its countless forms of cultivation, mercantile, religious and literary.

The crop statistics and statements of receipts and shipments of grain, produce and provisions are not, strictly speaking, fresh news, but they are sufficiently interesting to bear casual mention in this connection. Each im-

portant class is treated of separately and at considerable length. The summaries are as follows:

Though the production of corn in 1887 was 200,000,000 bushels less than in 1886, the valuation was \$35,000,000 more, the average price being 44 4 cents per bushel, as against 36.6 cents in 1886. The valuation was the highest since 1883, though below the average of the last eight years. The severity of the drought in the West was equal to that of 1881, when the crop was 1,194,916,000 bushels, and the yield 18.6 bushels per acre. The state of Kansas so suffered by the drought that her yield of corn was but 12 bushels per acre, and her production was 30,000,000 bushels less than in 1886, being 76,547,000 bushels. Illinois' production was 68,800,000 bushels less than in 1886, upon a breadth of 7,347,915 acres. Iowa produced more corn than did any other state, yielding 183,502,000 bushels. Illinois came next, then Missouri and Nebraska, these states producing 635,228,000 bushels.

The valuation of the wheat crop was \$310,612,960, which is \$3,613,000 less than the value of the crop of

valued at \$206,222,057, as against 2,058,037,444 pounds, and \$205,085,642 in 1886.

The exports of wheat aggregated 101,971,949 bushels valued at \$90,716,481, which exceed the corresponding statement of the previous year by 44,212,740 bushels and \$40,453,766, and also are in excess of such exports for the year 1885. The average export price for the year is 89 cents per bushel, as against 87 cents for the previous year.

The quantity of corn exported was 40,307,252 bushels, at a valuation of \$19,347,361, which is a very material reduction from the quantity and valuation of this cereal exported during the preceding year, the decrease in quantity being 23,348,181 bushels, and in value \$12,388,561.

The export of breadstuffs the past fiscal year was greater in value than during any year since 1883.

The total local receipts of grain for the year aggregated 132,506,776 bushels, as against 133,306,752 bushels for 1886; and reducing flour to wheat, 163,437,724 bushels, as compared with 151,437,724 bushels, showing a decrease of 799,976 bushels in the receipts of grain and an increase in the receipts of flour of 2,734,379 barrels, or a net increase in the receipts of grain and flour reduced to wheat of 11,504,729 bushels. The total receipts of grain and flour reduced to wheat for 1887 amounted to over 114,000,000 bushels more than were received in any other Western market.

The volume of trade in live stock for the year was very extensive. The receipts of cattle were 2,382,008, against 1,963,900 in 1886; shipments, 791,483, against 704,675 in 1886. Of calves, the receipts were 65,859, against 51,290 in 1886; shipments, 15,965, against 18,567 in 1886. Of sheep, the receipts were 1,360,862, against 1,008,790 in 1886; shipments, 445,094, against 266,912 in 1886. Of horses, the receipts were 46,404, against 27,599 in 1886; shipments, 46,155, against 26,388 in 1886. The receipts of cattle, hogs, sheep, calves and horses aggregated 9,325,985, at a valuation of \$176,644,597, as against 9,770,340 received during the year 1886, valued at \$166,741,754. The shipments of cattle, hogs, sheep, calves and horses amounted to 3,110,689, as against 3,107,416 in 1886.

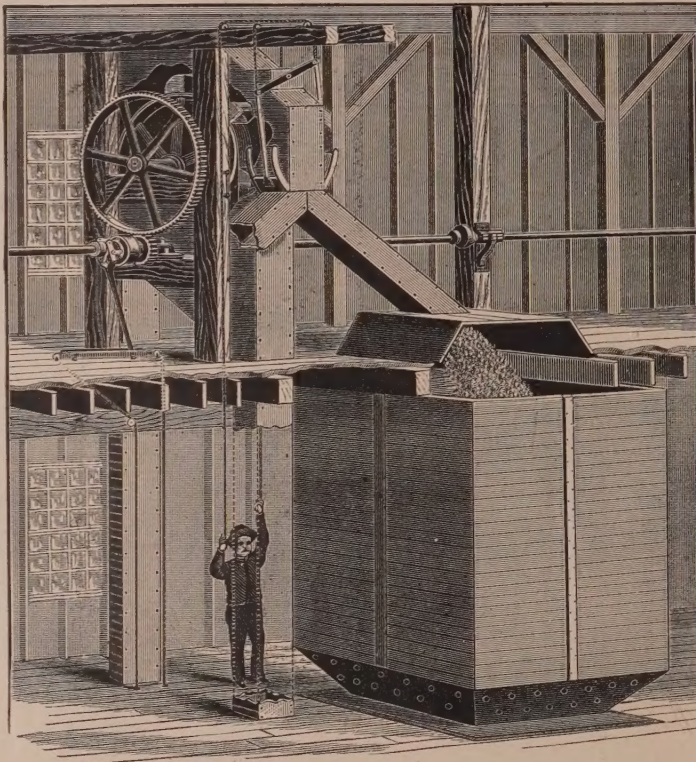
The largest number of cattle received during any week was for the week ending Nov. 26, 1887, and was 62,493. The largest number received in any month was for the month of August, 1887, and was 250,725.

Under the heading "The Lake and Gulf Waterways," there is a chapter which concludes with this forcible utterance:

The time has arrived when it is apparent that the waterway from Lake Michigan to the Mississippi should have a depth of 22 feet and a width of 160 feet, with such slope as to secure a discharge of 600,000 cubic feet per minute, and a velocity of two miles per hour. This great work should not be complicated or denationalized by any local features whatever. It is either national or sectional; if the former, it should be wholly constructed by the government; if the latter, the government should not be identified with any part of it.

A teacher had a small class in easy physiology. They had several lessons on the ear, and had been thoroughly drilled on the names and uses of all its parts so that when some visitors dropped in the teacher was glad it happened to be the hour for this class to recite. After asking several questions and receiving prompt and correct answers, she said: "What is the name of the canal in the ear?" The child hesitated a moment, and then spoke up loud and plain: "The Erie Canal."

The Department of Agriculture recommends as remedy for chinch bugs: First, clean cultivation and the removal and destruction of all rubbish; next, rotation of crops. Sow oats instead of wheat, or when fields have been troubled with the insect put them into buckwheat or flax. It is said that sowing a couple of quarts of flaxseed among other grain is a remedy, or at least will do some good. Rolling the ground after the wheat is sown in the fall is recommended. If the ground could be flooded in May the insect would be destroyed. Overlay the ground, when the area is not too large, with straw and burn it. Ditching will retard migration. Sowing strips of flax, clover or buckwheat around a field, it is said, will do some good. The kerosene emulsion will do good when the bugs are massing on corn.



NEW DRIVING AND SWITCHING GEAR FOR ELEVATOR HEADS.

1886. The average price and yield, viz., 68.1 cents and 12.1 bushels, respectively, do not vary materially from the corresponding figures for 1886. The farm price for 1887 was lower than for any year, excepting for 1885. The average crop for the last eight years is 448,815,699 bushels, with an average valuation of \$373,794,413. The average crop for the preceding ten years was 312,152,728 bushels, upon an average area of 25,187,414 acres, at an average yield of 12.4 bushels per acre.

Of oats 659,618,000 bushels were produced in 1887 on 25,920,906 acres, at a valuation of \$200,699,790, showing an increase in bushels of over 35,000,000, and in value of \$14,562,000. This crop seems to find a market equal to its volume, and is readily appropriated by the home demand.

The products of agriculture in 1887 constituted 74.41 per cent. of the entire exports of domestic merchandise, and amounted to \$523,073,798. The value of our exports of breadstuffs, cotton, and goods of cotton manufacture for the year, exceeded the value of the same articles exported in 1886 by \$42,027,927, the increase being largely in wheat and wheat flour. The value of our exports to the continent of Europe for the year amounted to \$567,952,021, which is \$34,337,626 more than the corresponding amount for 1886. The growth of our commerce may be perceived by the statement that in 1860 our exports to the United Kingdom amounted to \$166,000,000 in value, and during the last fiscal year to \$363,000,000. Our total exports in 1860 represented a valuation of \$333,576,057; in 1887 of \$716,183,211. The value of our imports of merchandise has increased from \$353,616,119 in 1860 to \$692,319,768 in 1887.

The most valuable of our articles of export is cotton, of which we sent abroad in 1887 2,169,457,330 pounds,

THE MORTON ADJUSTABLE TREAD HORSE POWERS.

The accompanying cut represents one of the well-known Morton Adjustable Tread Horse Powers which are familiar to our readers through the advertisement in our columns. The company makes a specialty of the manufacture of tread powers, comprising in all nine different styles and sizes adapted to every variety of work that comes within the range of this class of machinery. Several years ago the company saw the demand for a cheap power for elevator purposes that would take the place of the ordinary sweep power and be a convenient substitute for steam in small and medium-sized elevators at a low cost, and which would at the same time be inexpensive to operate and keep in repair. These powers are now presented to the public in their perfected form with confidence that inspection will reveal their superior qualities.

A glance at the illustration will show their principle and extreme simplicity. Attention is directed by the manufacturers to the following points: First, the means of adjusting the elevation of the power, which is accomplished by swinging the main body of the power from its center over a trunion and then by a crank and shaft working over rack and pinion, the desired elevation is obtained in a moment's time, even while the power is operating. When power is required only part of the time, which is the case in all small elevators, the elevation can be lowered so that the horse will stand on a level, the same as in a stall.

Attention is also directed to the automatic governor, by which the speed can be regulated to suit the step of the horse, and if at any time the machinery should meet with an accident, or the main driving belt be thrown off, there will be no perceptible difference in the speed, as the governors never fail to act, and at all times have complete control over the power. The change of the elevation does not change the tension of the belt, and the elevator can be run to its fullest capacity with cleaner; or by turning the elevation down to lessen power, the cleaner can be run alone with as steady a motion, it is claimed, as the most improved steam power. The difference in the price of cleaned and uncleaned grain will soon pay for one of these machines.

The chain is of the anti-friction pattern, consisting of malleable iron bales riveted together and contain small friction rollers which greatly reduce the wearing strain on the machine. Cross rods and track are made of steel, and the traverse wheels are turned up true, making the chain run smooth and easy. The advantages gained over steam are the cost of fuel and skilled labor required to keep it in order; no pipes to freeze and burst in cold weather, and the great reduction obtained on insurance.

Using nothing but the best material and workmanship in construction, the makers, the Morton Mfg. Co. of Romeo, Mich., take pride in producing a machine that is giving the best of satisfaction. Among those that are using these powers we would mention: Messrs. Miller & Ainsworth, Swartz Creek, Mich.; Johnson Bros., Thomas Station, Mich.; H. F. Bush, Gains, Mich.; J. M. Burns, Tipton, Mich.; A. J. Loomis, Coldwater, Mich. The manufacturers will take pleasure in giving any desired information respecting any of their tread powers.

In his interesting articles on the cost of the production of wheat, Mr. Edward Atkinson says that Dakota is capable of producing on one-sixth of her area all the wheat required for consumption by the population of Great Britain and Ireland. This statement on first reading seems improbable. But Dakota is 350 miles in breadth and 450 in length. The area of this magnificent territory is over 95,000,000 acres, and one-sixth of this could produce, at the present average yield per acre, nearly 240,000,000 bushels of wheat—more than enough to give bread to all the people of the United Kingdom. These figures give one but a faint idea of the vast productive capabilities of this country.—*Farm and Fireside.*

THE SCANDINAVIAN ELEVATOR COMPANY.

This company, recently incorporated, seems to have stirred up considerable opposition, and one of the Scandinavian papers, the *Svenska Folkets Tidning*, published in Minneapolis, in commenting on a statement in the prospectus of the company that \$10,000 of the stock on which 10 per cent. profit is to be given away, says: "We are pleased that the mask has at last been torn from this concern. The Scandinavian Elevator Company is clearly the work of some very smart Yankees who harbor the delusion that we Scandinavians are green enough to bite at their hook. The idea that the originators are to appropriate \$10,000 worth of shares without paying a cent is worthy of the projectors. It is brilliant, but since the company is for all time to come to pay still additional 10 per cent. dividend, after interest, etc., is deducted, it is more than brilliant. It's magnificence embodied. But, gentlemen, who shall take hold? The green Scandinavians, presumably, yes. Not so badly concocted, after all. Deplorable, however, that the Scandinavians have

a change of ownership, is regarded as impracticable. Mr. David B. Doty, the treasurer, and who has charge of the Minneapolis office of the company, denies that it has given any cause for distrust to the Scandinavians, and says, with the exception of one man, there are not ten shares of the stock owned by the whole Scandinavian population of the Northwest, the name being assumed merely in place of any better one. He denies that any stock has ever been promised to any one except for value received, or any promise made to guarantee any certain dividend. Among well-known men connected with the company are President Loucks of the Dakota Farmers' Alliance and T. C. Hodgson and Gen. Barrett of the Minnesota Alliance.

GOVERNMENT CROP REPORT.

There was some reduction in seeding the winter wheat in some states, though the average breadth of all was but slightly reduced. In the East and South there was no material loss of area from freezing, but in several Western states it was considerable. The apparent reduction of

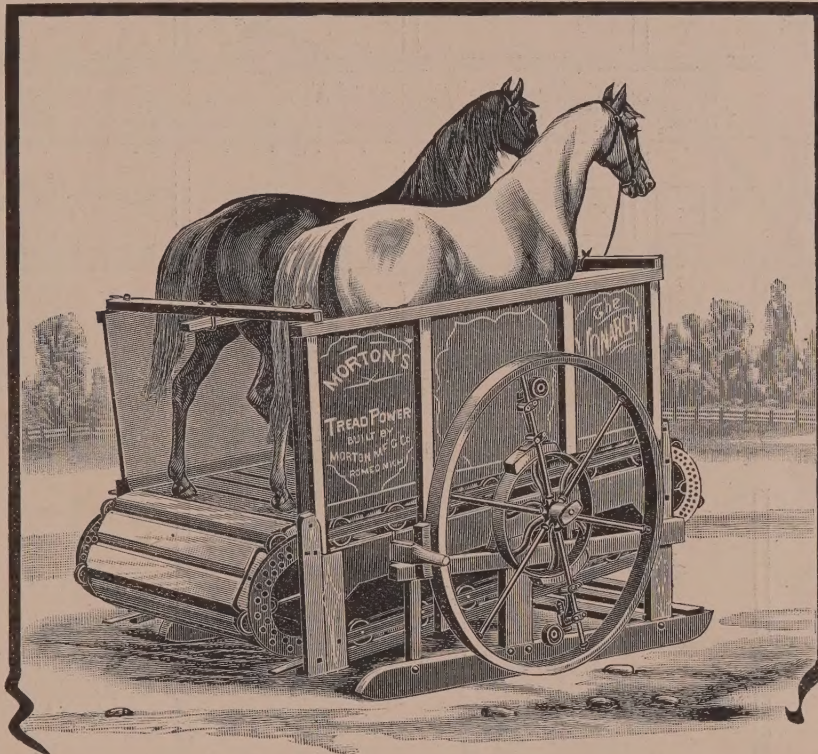
breadth of winter wheat as compared with that of last year is about 1,750,000 acres. The percentage of reduction for the entire winter wheat region is placed at 7.2 per cent. It is 18 in Illinois, 14 in Ohio, 10 in Michigan, and 9 in Indiana. This is in comparison with the reduced area harvested last year. There has been an increase of area of spring wheat in Dakota and in the territories further west, but a decrease in Iowa, Wisconsin and Minnesota, making an average decrease for the spring wheat region of 1 per cent. The area in wheat is apparently slightly below 36,000,000 acres. There is slight local change of condition of winter wheat. Some improvement in New York and Pennsylvania, and marked decline in Missouri and minor changes of states elsewhere, making the average 73.3, against 73 in May. The loss by overflow of the Mississippi in Illinois offsets in part improvement of other counties. In Ohio, Indiana, Michigan and Kansas the average condition is nearly the same as in May. The acreage of barley is nearly the same as last year, New York and Wisconsin are credited with an increase of per cent., Minnesota 2, Dakota 10. Iowa, Missouri and California report a small reduction. Condition of barley averages 88.8. It is only 80 in California. The area of rye is practically the same as last year. Condition 93.9.

The detailed report of the Department of Agriculture makes the total acreage of winter wheat 22,507,172 acres, and the estimated yield 237,360,000 bushels.

TAXING GRAIN IN ELEVATORS.

A number of elevator companies doing business in North Dakota claim they should be assessed on wheat in the elevators May 1. La Moure and other counties claim the wheat should be assessed April 1. The elevators, it is said, are fighting this interpretation of the statute and claim they should only be assessed as merchants, and as far as taxation purposes are concerned they are only merchants. Whatever the result of the dispute, many of the elevator companies run the grain out of the territory between April 1 and May 1, avoiding large assessments. It is estimated that 1,000,000 bushels have thus been removed from the assessors of the various counties, and a tax of some \$10,000 or \$15,000 escaped thereby. Individuals as a rule are assessed on property owned April 1, and farmers having wheat unseeded or holding their grain are obliged to pay taxes thereon. Many protests against this are being heard, and numerous lawsuits are in prospect.

A Kansas man claims to have invented a fence to keep out chinch bugs. He takes a strip of flooring and sets it on the ground with the groove side up. In the groove he puts candle wick and saturates it with coal oil. The chinch bug, when it crawls up the side of the board and gets a sniff of the kerosene, retreats in disgust.



THE MORTON ADJUSTABLE TREAD HORSE POWER.

now lingered long enough on this side of the Atlantic to lose some of the green color. They are no longer to be imposed on by imaginary schemes and air castles. We don't bite worth a cent."

The Minneapolis *Tribune* has been inquiring into the inside history of the company, and states that one of the leading spirits of the organization has pursued an aggressive policy which has brought him into hostility with all other elevator companies in that section. It is said that his business methods are not strictly commendable, although many of the complaints made against him cannot be traced to any reliable foundation. One of these charges is that he would purchase a small warehouse at some good point and put out a sign with the price of wheat several cents higher than other companies were paying at the same place. When the house was filled, which could be speedily done, it was closed, but the sign still left hanging. Another charge is that this man had demanded a royalty of $\frac{1}{4}$ or $\frac{1}{2}$ cents per bushel from certain elevators on all the wheat taken by them at specified stations, under a threat of opening a house at that point himself if they refused. Another proposition is said to have been made by the company to Liverpool wheat buyers to put wheat down in Liverpool for 17 cents less than any other company. The *Tribune*, however, failed to trace these rumors to any reliable source. The grain men in the Northwest do not look with favor on the new company, it not having sufficient financial backing, they say, to warrant the extensive business it proposes to carry on, and the plan for sending wheat from the farm to Liverpool, and even placing it in foreign mills without

PNEUMATIC MALTING OF GRAIN.

Our illustrations on this and the opposite page show the details of the Saladin System of Pneumatic Malting of Grain, a process perfected since 1880, by Mr. J. Saladin of Nancy, France. By this system, it is claimed, a uniformly excellent malt can be produced, regardless of changes of season, free from mold-formation or flinty malt, and waste from crushing or scattering kernels entirely prevented.

In addition to the advantage afforded by the Saladin System in enabling the malting of grain to be carried on uninterruptedly during the entire year, and the superiority of the product, the manipulation of a malting establishment is much simplified, one man sufficing to control the largest establishment.

The stirring and turning of the layers of grain is accomplished automatically by means of machinery, as often as is necessary without damage to a single sprouting grain, and with such precision as hand-labor can never attain.

The loading and unloading of the germinating compartments, as well as the conveyance of the malt to the elevator that hoists it to the malt kiln, can easily be done by machinery, so that hand-labor may be almost entirely dispensed with. A very important advantage in the Saladin System is in economizing space, and consequent increase of the production. In a malt house of the old style $6\frac{1}{2}$ bushels of malt per square foot of germinating floor, during nine months of the year, is the product, while every square foot of compartment surface under the Saladin System suffices to convert, during forty-nine weeks of the year eighty two bushels of barley into malt, which includes the time for withering the malt in the germinating compartment before the malt is conveyed to the kiln, thus greatly increasing the operating capacity of the kiln, and effectually preventing the generation of flinty malt.

It will be seen from the foregoing that, including the space taken up by the aisles and necessary ventilating machinery, only one-fifth to one-seventh of the surface used under the old system is required under the Saladin System to produce the same quantity of malt. The germinating room can be located as well in the uppermost story as in the basement of buildings, therefore the old style malt house can be arranged for the new system without difficulty, and thus the manufacturing capacity can be largely increased without erecting new buildings.

As shown by the illustrations, the germinating floor is divided into a series of compartments. *B*, the dimensions of which may vary in width between from 5 feet 6 inches to 13 feet 9 inches, and which may be extended to a length of 90 feet. The side walls of these germinating compartments are built of brick or tile laid in cement. The floor between these walls consists of cement pavement. The germinating floor *C*, made of perforated sheet metal, is placed above the cement floor to provide the air chamber *P*, and the side walls extend above this perforated floor about 3 feet 7 inches. Where admissible the floor *C* is placed about 5 feet 6 inches above the cement floor upon rigid cross bars to make the chamber *P* high enough for a man to walk under, but where the space vertically

is insufficient for a high air chamber *P*, the same can be limited to 20 inches in height, in which case the perforated floor *C* is divided into sections which are removable and in succession can be swung up to occupy a vertical position, as shown by *E* in Fig. 3. The shorter end walls are made of sheet metal, each composed of a series of semi-cylindrical niches for admitting the helices of the malt-turning machines. The front end wall *J* is made

of the malt-turning machines.

These stirring and turning machines consist each of an iron carriage *G*, traveling upon rackbars *F* secured upon the side walls of the compartments, each carrying so many vertical helices *H* as are necessary to take up the entire

width of the compartment (from 3 to 8 helices). These cork-screw like helices reach to the floor *C*, and while rotating slowly lift the barley from the bottom upward, loosening the same and turning the layer upside down while the carriage is moving slowly from one end of the compartment to the other. The reversing of the motion of the carriage is automatic, and the machines are driven from a line shafting *M*.

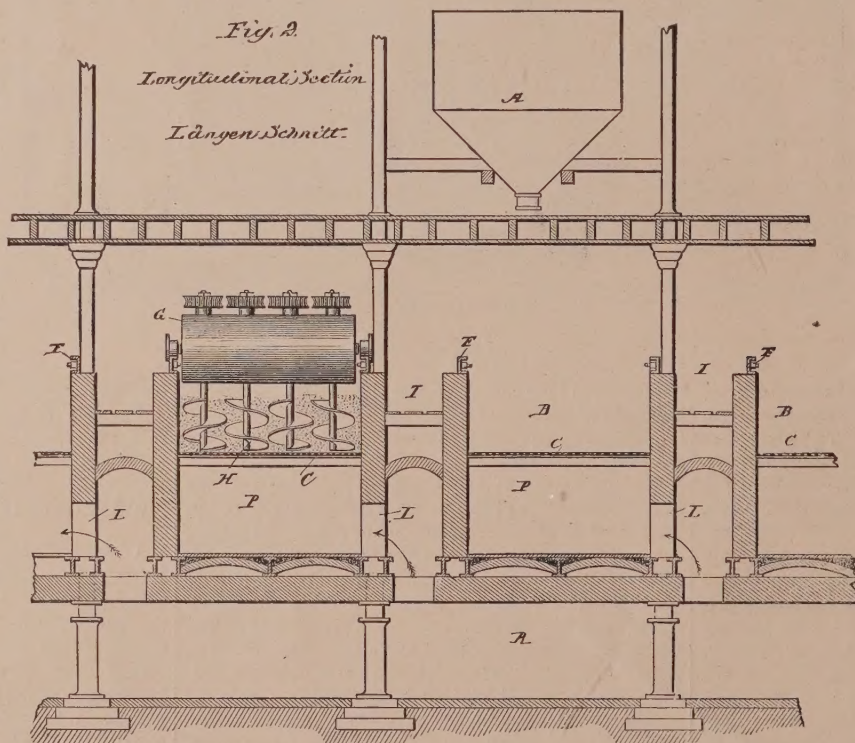
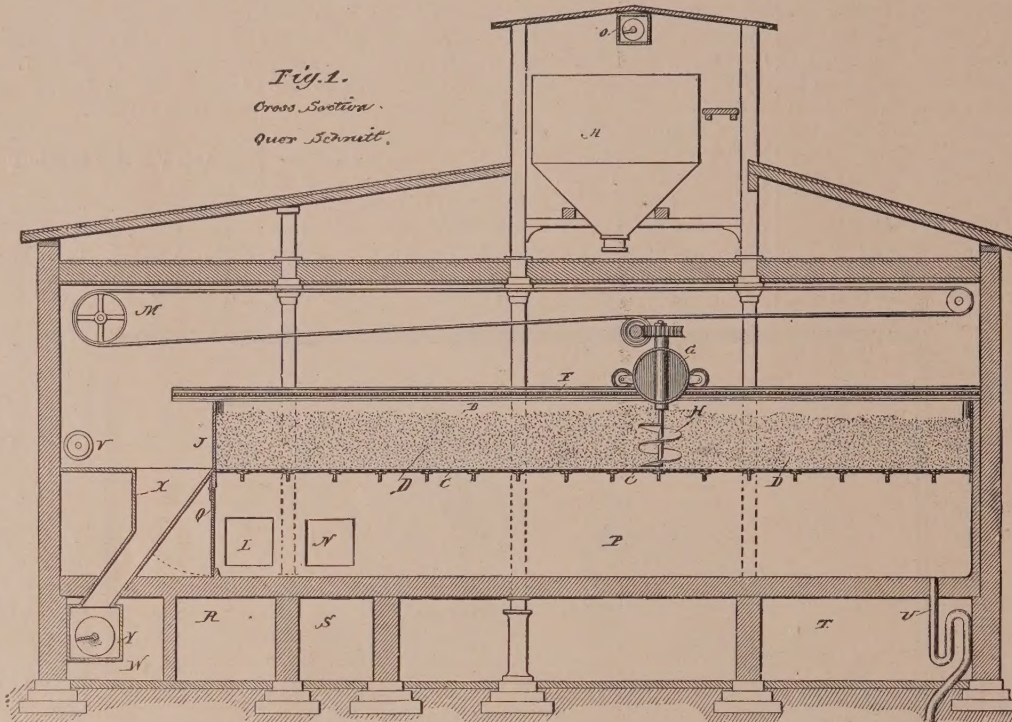
The supply of moistened air for the purpose of ventilation is furnished by a pressure fan, which draws fresh air from outdoors, and for the purpose of moistening, drives the air through a so-called Echangeur, consisting of one (or more) large drums of nearly 6 feet diameter, and up to 11 feet long, the shell of which being composed of six layers of perforated sheet metal. This drum during its rotation dips into the water of a basin to the depth of about

8 inches. The temperature of this water should be about 50 to 55 degrees Fahrenheit, which temperature as may become necessary, can be raised or lowered by suitable means (steam or ice). The larger quantities of the air furnished by the pressure fan pass through this echangeur and through the particles of water carried in the perforated shell thereof, where it is saturated with moisture and tempered to the particular degree required. A small portion of the air does not pass through this apparatus, however, but through a heating apparatus placed separately, and heated there to about 80 degrees Fahrenheit. The tempered moist air is conducted through a tunnel *R*, and its admittance into the air chambers *P* below the several compartments *B* is regulated by valves *L*. The warmed air is conducted through the tunnel *S*, and its admittance into the air chambers *P* is regulated by valves *N*. The valves *L* and *N* are arranged to be opened or closed from the aisles *I*.

The warmed air is used for withering the malt after having completed its germinating process, preparing it thereby for the kiln drying. The gases generated from the germinating process, as well as all foul air from the malting room, are exhausted through openings in the aisles between the compartments leading into the foul-air tunnel *T* by means of a suction fan, and are discharged outdoors, whereby the entire room is thoroughly ventilated and the formation of mould is prevented.

On a floor above the germinating room are located the steep tanks *A*, which may be filled with barley from the grain storage house by means of a conveyor *O*, and from these steep tanks the barley may be discharged, together with the steep water, through a hose upon the compartment floor *C* to a uniform layer thereon.

Through the perforations in floor *C* the steep water will drain off into air chamber *P* to be discharged into the sewer through pipe *U*. After the green malt has been



THE SALADIN SYSTEM OF MALTING GRAIN.

detachable for more readily unloading the green malt from the compartment after the germinating process has been completed, either by a large scraper guided by a man and drawn by a rope winding upon a spool *V*, driven by steam power, as in Figs. 1 and 2, or as in Fig. 3, by means of a cart or truck *K* pushed in between the uplifted sections *E* of the perforated floor *C*.

A thorough cleaning of the compartment being necessary after each emptying of the same; the taller air chambers *P* can be washed from the inside, and the shallow ones can be cleaned while the perforated floor sections are swung open. Thus it can be seen, with either one of the two constructions, the air chamber *P* is easily reached for a thorough cleaning.

Upon the perforated floor *C* is spread the steeped bar-

withered and is ready for the malt kiln, the end wall *J* is removed, and by means of a scraper, drawn by winding drum *V*, the malt is discharged into the hopper *X*, whence it will spout into conveyor *Y* to be moved into the boot of an elevator hoisting it to the malt kiln.

The germinating of American barley requires generally only four and one-half days, and never more than five and one-half days, according to the quality of the same, and withering and removing of the malt, cleaning the compartment and the reloading with steeped barley takes up one half day. During the germinating process the maltster will examine, from time to time, the temperature of the barley from thermometers inserted therein, and will adjust the valves accordingly. The malt turning machines he will set in motion to pass through the layer of malt whenever he finds it necessary for preventing a felting together. After the germinating process has been completed, he closes valve *L* and opens valve *N* for withering the malt, and after the green malt has been removed, the germinating compartment, as well as the air chamber *P* below it, to which a man finds admittance through door *Q*, must be thoroughly cleaned before the compartment is refilled with barley from the steep tanks above.

The sole agents for the United States are the Saladin Pneumatic Malting Construction Company, 65 S. Clinton street, Chicago, who will give interested parties any desired information. Otto C. Wolf, 112 Arch street, Philadelphia, is sub-agent for the Middle Atlantic and New England States.

THE NEW YORK ELEVATOR BILL.

The McEvoy Elevator Bill which created so much excitement and discussion during the recent session of the New York Legislature, and was so bitterly opposed by the grain and elevator men, became a law June 11, by the action of Gov. Hill, in affixing his signature to the document which had passed both houses of the Assembly. The members of the New York Produce Exchange, on May 21, held

a meeting and passed resolutions protesting against such action, asserting that the present charges for elevating and transferring grain were just and equitable, and that in their opinion under the reduction provided for in this bill, it would be impossible to operate elevators in the port of New York, which would necessitate the handling of grain by the half-bushel, as was the custom thirty years ago. They charged that it was an unwarranted and unconstitutional invasion of private rights, and a confiscation of private property without compensation. A committee was appointed to proceed to Albany and urge the Governor to veto the measure at an early day before canal navigation opened.

In an address by President Orr upon the adoption of these resolutions, he said: "I hold to some extent an individual interest in elevators, but in addressing you I place that personal interest to one side and talk with an intent single to the good of the Exchange as a great commercial body whose rights are threatened by the proposed legislation under discussion. The points of this grain elevation discussion are divisible into three: 1st. The charge made to the canalboat for the discharge of cargo. 2d. The charge which properly belongs to the grain itself, viz., weighing. 3d. The charge which properly belongs to the vessel receiving the grain from the canalboat, viz., trimming, etc. Upon all these points the supporters of the bill in question make the allegation of exorbitant charge levied by the elevator men, while the facts as to all of them are as follows: On the first it can be said that only one-half is now charged for service performed in two hours which in the old days before the introduction of grain elevators required two days in the performance at twice the present expense to the canal boatmen. As to the second point, or weighing, the following facts speak eloquently for themselves: The present charge for

weighing one bushel of wheat is $\frac{1}{2}$ cent, which also pays for ten days' storage, which of itself is supposed to be worth $\frac{1}{4}$ cent, the weight of said bushel being 60 lbs. This is the charge on wheat, which is declared by the advocates of the McEvoy Bill to be exorbitant. We will compare it with the charge for similar service made on other articles of commerce. On cotton, per 60 lbs., the weighing charge is 1.5 cents without storage; on lard, the weighing charge is 9-10 cents per 60 lbs. without storage, and on coffee, per 60 lbs., the weighing charge is $1\frac{1}{2}$ cents without storage. Stripped of the storage, our wheat-weighing charges are reduced to $\frac{1}{4}$ cent per bushel, or from $\frac{3}{4}$ cent to $1\frac{1}{4}$ cents less than corresponding articles of commerce against which no outcry is raised.

"As to the third point, the testimony offered upon this subject to the Senate Committee by Mr. F. W. J. Hurst, agent for two ship lines in interest, explains the situation fully. In this testimony Mr. Hurst stated that he had never held any interest whatsoever in elevators, yet he was compelled to say that should elevator service be denied his vessels, the carriage of grain would, of absolute necessity, almost if not entirely stop. This elevator service, rendered in a rapid and satisfactory way, costs only 29c. per ton, while the loading of rolling stock, when

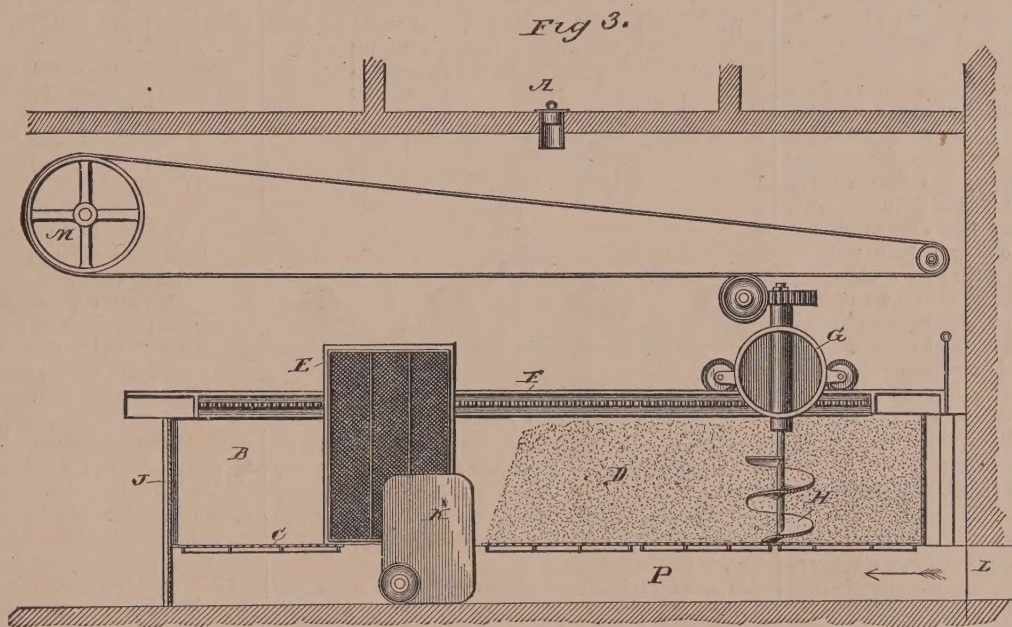
are in operation. He showed that the bill was constitutional, that the rate was reasonable and offered fair profit to the elevators, and the charge in Buffalo and New York was excessive and obstructive to transit. Wm. E. Cleary, who represented the canalboat owners, as well as the Boatmen's Association, made a strong speech in favor of the bill. Capt. M. Du Puy, who has been one of the warmest advocates of the measure, spoke as follows:

"Your Honor, it seems to me that we ought not to trespass on your overburdened time one moment on this particular question, for enough has been known and said about the insane acts of the elevator owners at New York and Buffalo, to have justified the Legislature in reducing and limiting elevator tolls on canal grain ten years ago. Now it appears that the defendants in the case would like to talk over the matter ten to fifty years longer. But our commerce is being spirited away too fast, to stop to argue the case any longer.

"As I have the floor and am entitled to at least five minutes to speak for the boatmen and the people, I will read a part of two highly important letters, from parties who know whereof they speak, on the subject of elevator charges. The first is part of a letter written to the Hon

L. B. Sherman by Messrs., Fleming & Boyden, Chicago. Relative to the subject of elevator charges at the city of Buffalo they write: 'We would state that we ship grain largely to Boston by lake and rail through the Canadian ports at an expense of $1\frac{1}{8}$ cents per bushel less for elevator charges than we can through the port of Buffalo; that we ship to Baltimore by lake through the port of Sandusky at an expense of $1\frac{1}{4}$ cents less than is charged in Buffalo for elevator charges; that we are prevented from using the Erie Canal to quite an extent by the excessive charges for transferring to canalboats in Buffalo.'

"In support of this statement I quote the charges for the transfer of 1,000 bushels of grain in each of these cities:



THE SALADIN SYSTEM OF MALTING GRAIN.

conducted in the most economical way by hiring their own men, costs the steamship companies 35c. per ton, the same service under stevedore supervision costing 40c. but always with this material difference—that by elevator service the steamship people can in an hour's time run in grain to fill up a light general cargo, which work by the old system would require considerable over a day in the performance; the difference constituting an unbearable loss of time to the transportation companies."

The law will affect the grain trade in every city of 130,000 population, and particularly the cities of New York, Brooklyn and Buffalo. Its provisions limit the charge for elevating, receiving, weighing and discharging grain by means of floating elevators and warehouses, to $\frac{1}{2}$ of a cent per bushel, the steamships and canalboats only being required to pay the actual cost of shoveling the grain to the leg of the elevator when unloading, and trimming the cargo when loading. A fine of \$250 or more and costs is imposed for violating the act. The passage of the bill was urged by Erie canalboat owners, while the elevator and grain men fought against it.

Deputations from both sides were given a hearing by Gov. Hill, May 24, and arguments pro and con were advanced. The old charge of 1.35 cents per bushel for elevating grain was declared to be a reasonable rate, while on the other hand it was called an extortion, imposing unreasonable burdens on the boatmen and taxpayers, causing the withdrawal of commerce from its natural channels and the building up of monopolies to the detriment of the state. Judge G. W. Smith of Herkimer, read figures to show the greed of the New York and Buffalo elevator pools. The total cost of elevation from car or boat to boat at Chicago, was \$7.75; at New York, \$18; at Buffalo, \$14.50. The Buffalo pool has forty elevators who receive good dividends, although but twelve of them

CHICAGO CHARGES.

Grain pays elevator.....	\$5 00
Boat pays trimming out.....	2 00
Vessel pays trimming in.....	75
Total per 1,000 bushels.....	\$7 75

BUFFALO CHARGES.

Grain pays elevator.....	\$7 50
Vessel pays elevator for elevating.....	1 25
Vessel pays elevator for trimming out.....	4 50
Boat pays elevator trimming in.....	1 25
Total per 1,000 bushels.....	\$14 50

NEW YORK CHARGES.

Grain pays elevator.....	\$5 00
Boat pays elevator trimming out.....	1 50
Boat pays elevator.....	3 50
Vessel pays elevator trimming in.....	2 00
Vessel pays elevator.....	6 00
Total per 1,000 bushels.....	\$18 00

For the same service rendered at Buffalo and New York the total cost per 1,000 bushels for elevating, shoveling and loading on cars

At Collingswood, Canada, is.....	\$7 00
At Midland and Port Huron.....	7 00
At Kingston.....	5 00
At Montreal, Ogdensburg and Oswego.....	5 00

"The next letter I will quote from was written to the Hon. Wallace Tappan, by W. S. Nelson of Fulton, N. Y., who owns an elevator at that place. Mr. Nelson says that he has had grain transferred, including thirty days' storage, at Oswego, for $\frac{1}{4}$ of a cent per bushel. He also states that $\frac{1}{4}$ of a cent will pay an elevator well for a direct transfer of grain."

A Buffalo dispatch says that an angrier set of elevator men cannot be found anywhere in the state than in Buffalo, and that two hours after the news of the signing of the bill had been received, the Elevating Association had issued a new card of rates to take effect at once. They expect to even up things by charging storage, so that if

grain remains in the elevator but an hour, there is the $\frac{1}{4}$ of a cent per bushel charge for storage.

There is much curiosity to learn what the New York transfer elevators will do, many believing that they will refuse to handle grain, thus blocking the trade at New York City. Elevator men in Buffalo affect to believe that the bill will hurt the canal greatly, and the manager of the associated elevators who has a large quantity of grain on hand, will at once forward it by rail, and he predicts that grain will be sent by this method to Baltimore and Philadelphia, hereafter. He will refuse to receive grain from the present time, unless it is put into store. When the news first reached Buffalo the effect was to cause a drop of $\frac{1}{2}$ cent immediately. The firm of Annan & Co., who operate the largest fleet of floating elevators in the port of New York, said: "It is a confiscation of our property. The elevators are built for one purpose, the handling of grain, and it is impossible for us to operate them under this law, so it is virtually taking our property. We have thirteen elevators. Each of them cost many thousand dollars to build; we have stopped work on them all, for if we work under this bill it will ruin us, and if we work at the old rates we shall be subject to fines and suits from the canal people." The owners of steam vessels take a great interest in the subject, as if the elevators are all shut down grain will have to be conveyed in small quantities by hand, which will cause them great trouble and delay.

It is hardly probable, however, that the owners of elevators will allow their buildings to go to decay while they watch the crumbling piles with their idle hands in their pockets, and at the same time see the canal men growing rich and waxing fat, under the same law which they say will prove their financial ruin. They have had the reins in their own hands for a long time; let them learn to quietly occupy a back seat and let somebody else do the driving for a while. Vaulting ambition very frequently leaps over the saddle and finds itself in the mud puddle, and very little sympathy will be felt for those who have listened with apathy to the complaints of men whom they deprived of the honest profits of their labor. The elevator bill has become a law, and as such must be obeyed, and we shall see, what we shall see.

SHRINKAGE IN GRAIN SHIPMENTS.

Much complaint has been made by shippers of grain and produce to Chicago, in regard to the "shrinkage" in the amount of their consignments after reaching this city. A thorough investigation made by a representative of the Chicago *Tribune*, has proved that there is just cause for these charges, and that careless handling of property by the railroads in transferring, or after reaching the terminus, results in great loss to the shipper. Some of the railroads have transfer elevators which prevents the cars being opened in the yard, but in most cases the merchandise is exposed. On the latter roads it is estimated that of the 1,300 cars total, 40 per cent. lose from \$2 to \$5 per car. On the basis of \$2 per car, this represents a loss of nearly \$325,000 a year.

In grain, most of it is consigned to elevators, and in this case no stealing can be done, but where it is transferred from the car by shoveling, a good chance is afforded for the laborer to abstract what he chooses. Wheat delivered by the team on tracks is carelessly wasted by the teamsters, often to the amount of a bushel a load. This is eagerly picked up by the gangs of foreigners, women and children, who swarm in the railroad yards on the look-out for pickings of any description. The car sweepings are also a source of profit to persons who buy the privilege of cleaning out the cars for the sake of the grain left in them, and it can easily be made an object to the shoveler not to make too clean a job.

It is frequently the case that when cars are loaded to the top, the temporary contrivances over the door are torn away and the grain spills out for miles along the track. While these leakages seem small in themselves, they amount in the aggregate to a large sum which is a loss to the producer. The Board of Trade will probably investigate the matter and see what can be done to remedy the matter. Some of the roads employ special police to look after merchandise arriving in their yards and do not allow pedlars, women or children to enter the premises. Other roads say they have nothing more to do with the goods after the consignee has been notified and has broken the seal of the cars. Still other roads have adopted new regulations and do not allow the sweepings to be

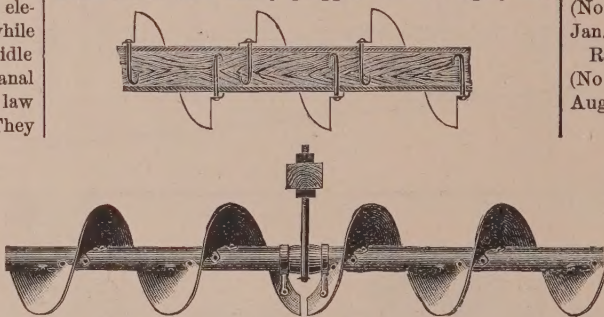
sold, as it was found that a regular system of stealing had been carried on by means of such an arrangement.

LYMAN SMITH'S CYCLONE.

A dispatch to the New York *Times* from Buffalo says: "Lyman Smith's Cyclone elevator, of which such wonders were expected, still lies idle in Buffalo Harbor. His invention is mainly for transfer purposes, and is worked by pneumatic process. The Cyclone elevator is extremely rapid in its operation, and the inventor says it will revolutionize the elevating trade. But there is one great obstacle in the way—he fears that any boat giving him its trade will be boycotted by the regular elevators, and Mr. Smith is now said to be endeavoring to overcome that objection. His plan is to organize companies in Chicago, Buffalo and New York, so that boats will be loaded at Chicago and their grain finally delivered in ocean steamers at New York perfectly independent of the regular elevators. He is understood to be in New York at present to interest capitalists there.

THE CHASE PATENT SPIRAL STEEL CONVEYOR.

We present herewith an illustration of the above conveyor. The principal points of merit are that the wrought iron hollow shaft is firmly plugged with thoroughly sea-



THE CHASE PATENT SPIRAL CONVEYOR.

soned wood, making the shaft firmer, and preventing its sagging in the middle. Each one half flight is firmly fastened to the shaft by means of a lug (the lug being part of the flight), fitting closely to the shaft, and through which a wrought nail is passed and clinched on opposite sides, as shown in cut.

As each flight has two solid fastenings, it makes the conveyor almost indispensable, and it cannot be stripped. The manufacturers say that, although over 10,000 feet of this conveyor are in operation, not one length has ever had the flights stripped from the shaft through some foreign substance getting into the conveyor box.

MESSRS. WELLER BROS., 94 Wendell street, Chicago, the manufacturers of the Chase Conveyor, and other mill and elevator specialties, will take pleasure in giving information and quoting prices, on application.

A correspondent writes to ask if any successful wheat corner in Chicago was ever run in July. From personal recollection, and from an investigation of the record, we find the following facts in regard to corners. The affair of June, 1887, it is hardly necessary to mention; it will not soon be forgotten by Chicago merchants. The year 1882 was remarkable in respect to corners. The first corner was in April of that year, when it sold at \$1.30 and closed at that. But there was a good deal of defaulting, and a committee was appointed which named \$1.31 as the settling price. Another corner existed in June, when No. 2 sold at \$1.36 and closed at that; but a committee, appointed under the rules of the Board, fixed the settling price at \$1.33. There was a third corner in July, the closing price being \$1.36; another committee was appointed, which fixed the settling price at \$1.35. A fourth corner was run in September, the closing price being \$1.08; but a committee, appointed for that purpose, fixed the settling price at \$1.02. In August, 1881, there was another corner, and the month closed at \$1.40. Another corner was run in May, 1880, but it did not sell above \$1.19. An attempt was made to run a corner in August, 1872, but it broke on the 20th of that month, when the price fell from \$1.50 to \$1.10. In August, 1871, there were two corners, one for the "first half" of the month, which was then a leading "option," and when that was over one was attempted for the last half, but was not fully carried out.—*Daily Business*.



Issued on May 15, 1888.

APPARATUS FOR WEIGHING GRAIN.—William B. Avery, Digbeth, Birmingham, County of Warwick, England. (No model.) No. 383,032. Serial No. 218,531. Filed Nov. 11, 1886. Patented in England May 1, 1886, No. 5,931; in France Oct. 2, 1886, No. 178,828; in Belgium Oct. 14, 1886, No. 74,839; in Germany Oct. 16, 1886, No. 39,088; in Spain Jan. 17, 1887, No. 6,507; in India Jan. 22, 1887, No. 140, and in Austria-Hungary March 17, 1887, No. 43,916.

BALING PRESS.—John N. Bartle, Midway, Tex., assignor of one-half to James Wright Gillespie, same place. (No model.) No. 383,033. Serial No. 270,851. Filed March 3, 1887. Renewed April 16, 1888.

CAR MOVER.—George S. Currier, Garnett, Kan. (No model.) No. 382,757. Serial No. 251,050. Filed Sept. 29, 1887.

ELEVATOR BOOT.—Marquis F. Seeley, Fremont, Neb. (No model.) No. 382,772. Serial No. 218,201. Filed Nov. 6, 1886.

BALING PRESS.—Peter K. Dederick, Albany, N. Y. (No model.) No. 382,954. Serial No. 80,908. Filed Jan. 4, 1883.

RICE SEPARATOR.—Charles J. Allen, New Orleans, La. (No model.) No. 382,931. Serial No. 210,620. Filed Aug. 11, 1886.

Issued on May 22, 1888.

FRICTION CLUTCH.—Helen C. Crowell, Cuyahoga Falls, Ohio. (No model.) No. 383,104. Serial No. 262,193. Filed Jan. 28, 1888.

AUTOMATIC GRAIN WEIGHER.—John Henry, Ardnoch, Dak., assignor of two-thirds to John George Neillson and William T. Shephard, both of same place. (No model.) No. 383,126. Serial No. 250,191. Filed Sept. 20, 1887.

GRAIN SEPARATOR.—Gurdon B. Bailey, Council Bluffs, Iowa, assignor of two-thirds to William Donoghue, St. Joseph, Mo. (No model.) No. 383,166. Serial No. 236,334. Filed April 27, 1887.

BELTING.—Leedham Biens, Philadelphia, Pa. (No model.) No. 383,208. Serial No. 264,177. Filed Feb. 16, 1888.

RICE HULLING MACHINE.—Evaristo Conrado Engelberg, Piracicaba, Brazil. (No model.) No. 383,285. Serial No. 215,702. Filed Oct. 8, 1886.

CLUTCH COUPLING.—George F. Hutchins, Worcester, Mass., assignor to the Knowles Loom Works, same place. (No model.) No. 383,297. Serial No. 263,846. Filed Feb. 13, 1888.

AUTOMATIC GRAIN METER.—Jacob C. King, York, Pa. (No model.) No. 383,362. Serial No. 263,103. Filed Feb. 6, 1888.

MACHINE BELTING.—Charles A. Schieren, Brooklyn, N. Y. (No model.) No. 383,373. Serial No. 268,416. Filed March 24, 1888.

Issued on May 29, 1888.

SWEEP FOR HORSE POWERS.—George W. Crane, Minneapolis, Minn. (No model.) No. 383,443. Serial No. 262,305. Filed Jan. 30, 1888.

CONVEYOR.—Amos H. Brainard, Hyde Park, Mass. (No model.) No. 383,556. Serial No. 258,587. Filed Dec. 21, 1887.

GRAIN-CLEANING CYLINDER.—William P. Clifford, Ottumwa, assignor to David W. Templeton, Fairfield, and Western Machine Works, Ottumwa, Iowa. (No model.) No. 383,627. Serial No. 195,269. Filed March 15, 1886.

CENTRIFUGAL GRAIN DRYING MACHINE.—Fredrich Melkersman, St. Charles, Mo. (No model.) No. 383,747. Original application filed July 16, 1887. Serial No. 244,528. Divided and this application filed Dec. 19, 1887. Serial No. 258,338.

Issued on June 5, 1888.

GRAIN-TRANSFERRING AND WEIGHING ELEVATOR APPARATUS.—Philander F. Chase, Chicago, Ill., assignor to the Chase Elevator Company, same place. (No model.) No. 383,860. Serial No. 248,163. Filed Aug. 29, 1887.

BAG HOLDER.—Isaac H. Weaver, Toledo, Ohio. (No model.) No. 384,104. Serial No. 259,734. Filed Jan. 3, 1888.

BAG FASTENER.—Henry W. Comstock, Lafayette, Ind. (Model.) No. 384,130. Serial No. 266,795. Filed March 10, 1888.



The Robert Aitchison Perforated Metal Company of No. 76 East Van Buren street, Chicago, report a recent shipment of perforated steel plates to New York City, which will be forwarded to Aspinwall for use in the Panama railway.

The Revolution Grain Meter Manufacturing Company has been incorporated at Pontiac, Ill., with a capital stock of \$12,000, to engage in the manufacture of grain meters. The incorporators are Jesse Hubbard, Henry A. Foster and H. O. Tangnary.

The Link-Belt Machinery Company of Chicago have purchased five and one-half acres of land on Thirty-ninth street at the Fort Wayne Railroad crossing, on which they will erect a foundry for the manufacture of machine castings, pulleys and gearing.

The E. H. Pease Manufacturing Company of Racine, Wis., have recently invented an attachment for any wood-turning lathe whereby pieces of wood may be turned in almost any form or pattern and in one-tenth of the time required to do the work by hand, besides having each piece the exact counterpart of every other piece.

The Economy Drill Company has been incorporated at Milwaukee, Wis., with a capital stock of \$25,000. They will carry on the business of drying or desiccating damp or wet grains, etc., and manufacturing drying machines. The incorporators are E. P. Allis, Sr., Frederick Pabst, Richard Birkholz and A. A. L. Smith.

An exchange gives an account of the rise and progress of the Canton (Ohio) Iron Roofing Company, from which we take the following: The factory plant operated by the company, conveniently located in close proximity to several railway lines, is thoroughly modern in every respect, equipped with a full complement of the most improved mechanical outfit, and with all appliances that could assist in the rapid transaction of a heavy manufacturing business. In the manufacture of their roofing and corrugated iron the Canton Iron Roofing Company possess many decided advantages. Being in close proximity to Pittsburg, the leading sheet metal producing center, they secure the best possible grade of stock at a minimum cost, and this, coupled with close attention to the processes of manufacture in their own factory, secures only the best possible results in all classes of the output. Briefly stated, the Canton Iron Roofing Company are manufacturers of the H. W. Smith patent roofing, a plan of construction that combines efficiency with quality and durability with perfection. In this material three grades are made—Bessemer steel of good heavy quality, and much superior to charcoal iron; Siemen-Martin's patent open hearth hammered steel and calaminated steel, which resembles galvanized iron, though far superior for roofing purposes, soldering more strongly than the other metals, and being also adapted for gutters and valleys.

The Babcock & Wilcox Co., 30 Cortlandt street, New York City, report the following sales during the months of March and April: Philadelphia Co., Westinghouse Building, Pittsburg, 152 horse power; Oneida Community, Limited, Community, N. Y., 61; L. Sterne & Co., Limited, London, second order, 10; Walker Bros., London, for Ceylon, seventh order, 20; Perera & Portabella, for export, 122; Alex. Marr, Aberdeen, Scotland, 50; Nelson Bros., Limited, London, Eng., 120; Massachusetts Institute Technology, Boston, Mass., 208; South Bend Iron Works, South Bend, Ind., third order, 150; Cie Francaise d'Elairge Electrique, Paris, France, 136; Alex. Smith, Aberdeen, Scotland, 20; La Refineria Barcelona, Barcelona, Spain, 208; Asa Loos & Co., Limited, Bombay, 372; S. L. Ferranti, London, Eng., 85; W. E. & J. Rigden, Faversham, Eng., 130; Cornell University, Ithaca, N. Y., second order, 500; Belasario Zayas Bazan, New York, for export, 51; J. Arce & Co., City of Mexico, 30; Gordon, Strobel & Laureau, Philadelphia, eighth order, 136; London Electric Supply Corporation, London, Eng., 3,000; J. H. Stewart, Withington, for Bahia, Brazil, 62; Willward, Bradbury & Co., third order, Liverpool, for Brazil, 83; A. Bary, Moscow, Russia, eighteenth order, 164; Fisher & Co., Huddersfield, Eng., 108; M. Crespo & Co., Havana, Cuba, 136; Heaton Button Fastener Co., Providence, R. I., 92; Walsh, Lovett & Co., Birmingham, Eng., 102; London Electric Supply

Corporation, London, second order, 93; Schwartzkopf Co., Berlin, Germany, 230; Henry Maurer & Son, Maurer's, N. J., 244; Louisiana Sugar Refinery, New Orleans, fourth order, 480; Troy Steel and Iron Company, Troy, N. Y., third order, 1,242.

ILLINOIS GRAIN DEALERS' CROP REPORT.

In his report of June 8, Mr. S. K. Marston, Secretary of the Illinois Grain Dealers' Association, draws conclusions from reports received by him as follows, the comparisons of stocks being made, apparently, with April 1:

The stock of wheat in country elevators has been reduced 52 per cent.

The amount of wheat now in farmers' hands is 2½ per cent. of a crop.

The stock of corn in cribs and elevators has been reduced about 40 per cent.

The amount of corn in farmers' hands is now 8½ per cent. of crop.

The stock of oats in elevators has been reduced 80 per cent.

The amount of oats in farmers' hands is less than 4 per cent. of crop.

Given by states, the percentages for reduction in stocks are as follows:

	Wheat.	Corn.	Oats
Illinois	50	50	85 to 90
Iowa	50	25	80
Nebraska	56	54	70
Kansas	65	62	85

Stocks in dealers' hands are from ¼ to ½ as much as one year ago.

Of the territory embraced in this report, Mr. Marston says: "I think this covers the states of Illinois, Iowa and Nebraska and parts of Dakota, Minnesota and Kansas where there is any surplus grain. There are large tracts of territory that are bare of grain. Many dealers return cards simply indorsed: 'No grain of any kind.' 'All will be fed,' or 'Shipping in.' If we include all the points where there is no grain, and count them all 0, it would materially reduce the percentage of the whole. I give the percentage as the reports figure, leaving out the blank spots almost entirely, but I am fully persuaded that if we figure these percentages down to bushels, even on the short corn crop of last year, we should have a large overestimate."

On the growing crops the report has the following percentages:

	Wheat plowed up.	Wheat pros- pects.	Corn.	Oats.
Illinois	22	54	103	111
Iowa	11	81	97	107
Kansas	1	66	105	112
Nebraska	85	105	110

A correspondent of the New York *Tribune* says, "The best of all ways to keep crows from pulling corn is to sow corn broadcast before the planted corn comes up. One quart to the acre will be enough until it is gone, then sow more. Some soak corn, but I never do. The crows will pick up cutworms enough to pay for the corn and the labor of sowing. I have seen sods that would weigh a pound or more that the crows jerked over to get a worm."

A. E. and E. B. Stevens, members of a defunct Chicago Board of Trade firm, in Chicago, are charged with embezzlement. It is said that Whitney & Co. of Deep River, Iowa, shipped Stevens & Co. four cars of oats, valued at \$911. The oats arrived in Chicago about Aug. 10, 1887, and have never since been heard of by Whitney & Co., although they have repeatedly written to Stevens & Co., in regard to the matter. The latter claim that the proceeds of the sale of the oats were wiped out with other assets at the time of the failure of the firm.

The Kirkpatrick-Christopher Commission Co. of Kansas City, report the results of special inquiries concerning Kansas crops. The present condition of wheat is 101 per cent. of an average crop. The acreage of winter wheat is 1,315,000, from which it is estimated a yield of 20,000,000 bushels will be made. The largest crop the state has produced in ten years was that of 1884, estimated at about 48,000,000, and the smallest crop, that of 1886, about 7,000,000. Corn and oats show a wonderful increase in both acreage and condition. Owing to the cold and late spring, harvest will be about ten days late. About the only thing that could prove injurious to the wheat crop between this and harvest would be chinch bugs or hot winds, which, owing to plenty of moisture and cool weather, seems hardly possible.



[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interests of the trade at large, or any branch of it.]

A NEW COMPANY.

Editor American Elevator and Grain Trade:—We have just organized a small warehouse and elevator company. Articles of incorporation have been received and we will be ready in a short time to issue certificates of stock to those who have subscribed for shares.

Yours truly, JOHN TEASDALE.

Alpena, Dak.

FREE TRADE IN ENGLAND.

Editor American Elevator and Grain Trade:—I am not a free-trader, but I don't think the condition of affairs in England can rightfully be quoted with effect by protectionists. It is a matter of record that pauperism has decreased one half in England since the abolition of the Corn Laws. Not only was the purchasing power of wages increased, but hours of labor were shortened and wages have increased. I do not think the same effects would be produced here; at least I am not sure on that point; but I do not believe any violent changes would occur if we were to adopt a lower tariff, while I see a good many ways in which our farmers could be benefited.

Yours, LEX.

A SUGGESTION.

Editor American Elevator and Grain Trade:—It seems to me that there is an excellent chance for grain men to unite and compile for their own use reports showing the state of the crops, the amount held in country elevators and probable amount held by farmers. The Illinois grain dealers already do something of this kind; but I think that a central bureau could be located for the Western and Northwestern states, to collect and publish this information. The cost divided among the thousands of grain men would be small, and the reports of such a bureau would be based on the best knowledge obtainable. The grain men and millers are always best informed as to crops, etc., in their own locality; and the report issued by such a bureau as I suggest would be immeasurably superior to anything we now have. Won't somebody with influence take up this suggestion and push the matter?

Respectfully, KANSAS MILLER.

Manitoba is destined to become famous for its barley. The Winnipeg Board of Trade reports that the crop of last season in the province amounted to 2,000,000 bushels, and a large proportion of the grain sent to Ontario was graded as No. 1, weighing 49 pounds to 53½ pounds to the bushel, whereas the highest standard barley of Ontario weighs only 44 pounds to 49 pounds.

How often it is that what seem our misfortunes turn out to be the best of good luck. A Toronto merchant had a cargo of 67,000 bushels of No. 1 Manitoba hard hung up in the ice last winter at McKay's Harbor in Lake Superior. It is just getting out now, and is worth 18 cents a bushel more than when it was frozen in. Profit from the transaction \$12,000, and no elevator charges to pay.—*Toronto Globe*.

An old operator on the Chicago Board of Trade says: "Whenever the stock of wheat gets so small that a man can put his arms clear around it, and that man therefore begins to run a corner on the strength of the small stocks, pretty much all the wheat in the country begins to point toward him, and if he runs his corner long enough it closes in on him from everywhere and buries him out of sight. The history of recent years shows it."

The directors of the Sioux City Corn Palace Exposition Company have issued a prospectus for the second annual corn palace festival. The palace will be on exhibition from Sept. 24 to Oct. 6 inclusive. The floor area will contain 20,500 feet. The general style of architecture will be Romanesque. The main tower will be 174 feet high, and the roof of the main structure 90 feet. The building will be water-tight and more elaborate in external decoration than was the palace of last year.

ELEVATOR AND GRAIN NEWS

Berlin, Ont., is to have a new steam elevator.
Harvesting began in Sutton county, Cal., on June 1.
M. Beckley will erect an elevator at Phillipsburg, Kan.
Brooks Bros. are building a grain elevator at Kempton, Dak.
Brass & Co. are building a grain elevator at Langdon, Dak.
C. Fitzpatrick, Lynnville, Tenn., is erecting a corn mill.
The Standard Oil Co., Decatur, Ala., will build a warehouse.
Paul Seeger, grain dealer, etc., Windom, Minn., will sell out.
C. H. Foster, grain dealer, etc., Cambridge, Mass., has sold out.
John Cronin, grain dealer, etc., Minneota, Minn., has sold out.
George H. Ames, grain dealer at Natick, Mass., has sold out.
M. Marx, Abilene, Texas, contemplates erecting a grain elevator.
James Anderson, Mincola, Va., is erecting a corn and flour mill.
J. M. Vanderhoof, grain dealer, etc., at Darien, Wis., has sold out.
E. E. Foskett, grain dealer, Franklin Falls, N. H., has sold out.
Dunning & Hartson, grain dealers at Rising City, Neb., have sold out.
G. N. Nesbitt, Cowansville, Ont., will build a large grain elevator.
The distillery of Mr. Summey, near Lowesville, N. C., will be rebuilt.
A grain warehouse will probably be erected at Starbuck, Man., this season.
L. Haworth, Dayton, Tenn., will build an addition to his broom factory.
J. H. Powers & Co., grain and flour dealers, Ossipee, N. H., has sold out.
A. B. Fitts, Carrollton, Ga., will purchase machinery for a broom factory.
Baker & Grosse, grain dealers, Kansas City, Mo., have made an assignment.
The farmers of Dakota are figuring on about \$30 per acre for wheat this year.
Maguire & Rover, grain commission, Cincinnati, Ohio; have dissolved partnership.
Martin & Carlisle, dealers in grain, etc., Itasca, Tex., have dissolved partnership.
The Farmers' Alliance of Ennis, Tex., contemplate erecting a cotton-seed oil mill.
Robertson & Morris, grain dealers, etc., at Rio, Wis., are succeeded by D. Roberston.
M. S. Fisher, Bonham, Tex., has added a roller corn meal plant to his flouring mill.
The jute mill at the prison at San Quentin, Cal., turns out 14,000 grain sacks per day.
Wilcox & Spencer, grain dealers, etc., Paris, Idaho, are succeeded by Wilcox & Co.
The Northern Pacific Elevator Company are building a grain elevator at Pingree, Dak.
H. C. Moseley & Co., dealers in grain, etc., Corsicana, Tex., have dissolved partnership.
John Moffatt, Berlin, Ont., is interested in a large grain elevator to be erected there.
A stock company will probably be organized at Cuero, Tex., to erect a cotton-seed oil mill.
Eighty thousand bushels of oats were shipped from Odebolt, Iowa, in one week recently.
E. Morrison & Co., dealers in grain, etc., at Bloomington, Ind., have made an assignment.
L. F. Edwards, Crawford, Ga., contemplates erecting a cotton-seed oil mill the coming fall.
Syddanes, Jones & Co., Derwood, Md., will add a \$3,500 warehouse to their flouring mill.
Messrs. Cofield & McDonald of Howard Lake, Minn., have sold their elevator to Cargill Bros.
A. L. Porter, Opera House Block, Chicago, Ill., wants a site where an abundance of seed may be secured and

proposals for erecting a cotton-seed oil mill, or he will purchase a complete working plant.

Bateman & Witherspoon, dealers in grain and cotton at Denton, Tex., have dissolved partnership.

Woolner Bros., Peoria, Ill., will erect an extensive addition to their brewery and otherwise improve it.

Armentrout & Childers are successors to Walker, Armentrout & Co., grain dealers, New Market, Ind.

The Rodney Oil Mill Co. of Rodney, Miss., will rebuild their cotton-seed oil mill, lately destroyed by fire.

Up to May 31 the amount of wheat shipped from Port Arthur, Ont., via the lakes, was 1,010,000 bushels.

The Emma Cotton-Seed Oil Mill Company, of Pine Bluff, Ark., will double the capacity of their plant.

The American Cotton Oil Trust, New York City, will probably build a cotton-seed oil mill at Elberton, Ga.

During the month of May 3,984,048 bushels of wheat and 57,312 bushels of corn were shipped from Duluth.

J. S. Mayes & Co., Covington, Tenn., will purchase a cotton-seed huller and wheat separator for their plant.

A cotton-seed oil mill will be erected at Wilmington, N. C., at once. Negotiations for a site are being made.

A site for a linseed oil mill has been selected at Portland, Ore., and \$100,000 subscribed toward its erection.

Fowler & Gants have established a new feed elevator at Omaha, Neb., having a capacity of forty carloads per day.

The Scandinavian Elevator Company have purchased the horse-power elevator of Johnson Bros. at Cokato, Minn.

The Auburn, N. C., Farmers' Alliance will build a cotton seed oil mill. M. Smith is secretary of the company.

J. Fleegie & Son of Arlington, Ky., are erecting an elevator in connection with their flouring mill at that place.

The Buchel Milling Co. of Cuero, Tex., contemplate increasing the capacity of their corn meal mill to 200 barrels daily.

Marshalltown, Iowa, wants a starch factory which will employ about 150 hands and consume 1,200 bushels of corn daily.

J. H. Thurston has resigned his position as wheat inspector for the St. Paul Roller Mill Company at Belle Plaine, Minn.

It is estimated that the grain dealers of Winnipeg, Man., realized \$700,000 by the recent activity in the wheat market.

Schuster & Evans of Chenoa, Ill., have purchased the feed mill, etc., of E. Thayer & Son at Forrest, Ill., and will operate it.

A new Reynolds-Corliss Engine of about 700-horse power will shortly be placed in the Duluth Elevator Company's elevator.

G. W. Read of the grain firm of Randolph, Read & Co., Broadwell, Ill., has purchased Mr. Randolph's interest in the business.

So far \$20,900 of stock has been subscribed toward the new distillery to be erected at Terre Haute, Ind., by Mr. Siedentopf and others.

The Pilot Point Roller Mill Company of Pilot Point, Tex., are building an elevator and will make some changes in their wheat cleaners.

The Oliver Company of Charlotte, N. C., are building a seed warehouse 50x150 feet, and contemplate increasing the capacity of their mill.

A 1,000,000-bushel grain elevator will be erected at Gladstone, Mich., by the Atlantic Elevator Company and the "Soo" R. R. Company.

The wheat harvest was in full blast in the vicinity of Eldorado, Kan., a week ago. Some fields will yield thirty-five bushels to the acre.

A company is being organized at Laurinburg, N. C., to erect a cotton-seed oil mill to cost \$20,000. D. D. McIntyre is interested in the project.

The Albany Oil and Refining Company of Albany, Ga., will improve their plant by the addition of new machinery and an electric light outfit.

A new linseed oil mill is wanted at Ellendale, Dak., and good inducements will be offered to the proper parties engaging in such an enterprise there.

The Grain Trimmers' Union of Toledo, Ohio, has fixed the wages of the grain trimmers for the coming season at \$1.50 per thousand bushels.

The Greenville Oil Mill at Greenville, S. C., is closed down temporarily and new machinery and an electric light plant are being placed in the building.

It is reported that the grain dealers of Lincoln, Ill., hold about 100,000 bushels of corn at this date, as compared with 600,000 bushels a year ago.

Mr. Edward B. Judson, a prominent grain merchant of Decatur, Ill., was married Wednesday evening, June 6, to Miss Grace Macoughtry, daughter of Hon. Thos. H.

Macoughtry of that city. A brilliant reception was given after the marriage. Mr. and Mrs. Judson went to Wisconsin for a brief visit.

The American Glucose Company of Buffalo, N. Y., will erect works at Peoria, Ill., to cost \$500,000. They will use 6,000 bushels of corn per day.

H. A. McLemore & Bro., Columbia, Tenn., have organized the Columbia Elevator Company, and contemplate erecting a 150,000-bushel elevator.

The starch works at Indianapolis, Ind., have been shut down for a few weeks in order to make some necessary repairs. They are now in running order.

Law & Pearson, Neepawa, Man., will shortly receive bids for the erection of a 50,000-bushel elevator to be equipped throughout with the best machinery.

Kearney, Neb., has a \$50,000 starch factory in course of erection. A three-story building with a capacity of 1,000 bushels of corn per day is being put up.

It is reported that the quantity of corn on hand in Illinois is 23,000,000 bushels, against an average of 51,800,000 bushels for the past nine years at this time.

Timewell & Sons, Winnipeg, Man., have prepared plans for the erection of a large grain elevator to be erected at St. Jean Baptiste, Man., by W. Martin.

The Gus Leisy Brewing Company has been incorporated at Peoria, Ill., with a capital stock of \$60,000. The incorporators are Gus, Edward and Albert E. Leisy.

William Monypeny has just completed the erection of a model grain warehouse at Columbus, Ohio. It will be occupied by the grain firm of Tallmadge & Williams.

G. B. Shaw & Co., grain dealers, etc., Edgerton, Kan., have sold out to the Kansas Grain and Elevator Company. The latter company has a paid-up capital stock of \$50,000.

Ford & Smith, dealers in grain at Illiopolis, Ill., successors to A. C. Ford & Son, will also buy grain at Laneville, Ill., at which place they will build an elevator immediately.

Kansas wheat is reported to have downed the chinch bug this time, and is now too far advanced to be in any further danger from these pests. It will be ready to cut about July 1.

The Dawson Oil Co. of Dawson, Ga., will enlarge their works. They want to purchase a second-hand 40-horse power engine of about 75 revolutions per minute, with heavy fly wheel.

The Lake Shore Railroad Company carried double the amount of grain in 1879 that it did in 1887. The grain-carrying business has steadily decreased with that company in late years.

George Bauernschmidt and others have incorporated the Bauernschmidt Brewing Company to operate the Bauernschmidt brewery at Baltimore, Md. They have a capital stock of \$500,000.

The biggest farmer in the Indian territory is Mr. Frank Murray, who will put in 6,000 acres of corn this season. His big cornfield lies in the Washeta Valley, about twenty-five miles from Purcell.

The safe of Lewis & Kearns, grain buyers at Albany, Ill., was robbed recently of \$1,200. The safe was located in the jewelry store of Ed. F. Schneider, who is accused of committing the theft.

C. S. Hulbert, the veteran elevator proprietor of the Northwest, and a member of the late firm of Pillsbury & Hulbert, Minneapolis, Minn., has recently returned from a two years' sojourn abroad.

Work will shortly commence on the new steam elevator and mill to be erected at Tecumseh, Neb., on the site of the one recently destroyed by fire. The burned plant was owned by James Hill.

Alexandria, La., is to have two immense new cotton-seed oil mills. The New Orleans Seed Company of New Orleans, La., will erect one, and a stock company of capitalists of that city will build the other.

The grain firm of Hazenwinkle & Cox, Bloomington, Ill., has an elevator at Hudson, one at Cooksville, and is now building one at Merna at a cost of \$2,000. They do an immense business at these three stations.

An incorporated company, under the style of the Dillon Cotton-Seed Oil Mills, will build a cotton-seed oil mill near Little Rock, S. C. James W. Dillon, Samuel Thompson and others are the incorporators.

The reports of the corn crop from Illinois, Indiana, Nebraska and Missouri are discouraging. Planting was late. Much of it had to be replanted, and the weather has been unfavorable. In Kansas the crop promises well.

Thomas Jensen, a prominent grain and stock dealer of David City, Neb., has made an assignment to George L. Smith. His liabilities are placed at \$30,000. Mr. Jensen represented his district in the Nebraska State Legislature in 1880.

The Red River Valley wheat crop will be larger this year than last, gains being made both in yield and acreage, so says Mr. James Holes, one of the oldest wheat growers of that section. He says the farmers have recovered from their low-price scare of 1886, and many acres that were summer-fallowed last year will be

cropped this year. He also says the heavy snows of last winter and the cold weather of the late spring have both been favorable conditions to the abundant growth of the golden cereal.

The annual report of the Farmers' Warehouse at Winnebago City, Minn., shows a total of 215,014 bushels of grain bought of the crop of 1887. The warehouse has been worth two cents per bushel on their grain to the farmers.

An independent wheat buyer at Edgerly, Dak., is building a large elevator to compete with the old line companies. This buyer kept the market price from 3 to 5 cents higher at that place last season than it was at any other market.

H. A. Spencer, elevator contractor and builder, Minneapolis, Minn., has the contract for enlarging the Hotel St. Louis at Lake Minnetonka. The contract is for \$10,000. Mr. Spencer has contracts for a number of country elevators, also.

General Superintendent Smith of the Northern Pacific Elevator Company, who receives daily reports from 125 stations in North Dakota, says that up to the present time all indications point to a full crop, if not to an increase over the average.

Oats are at a premium at Prince Edward Island. They have been selling at 35 and 37 cents per bushel, and are now about all bought up. At least 100,000 bushels have been shipped from the Island since navigation opened, to Montreal and points West.

The Indianapolis elevators June 1 contained 241,274 bushels of grain, against 46,513 bushels for the corresponding date last year. The supply was 11,726 bushels more of wheat, 101,459 more of corn, 82,147 more of oats, and 1,339 more of rye.

A company is being organized at Houston, Texas, to build a corn and flour mill and a grain elevator. The proposed capacity of the plant is 250 barrels of flour, 310 barrels of meal and grits and 100 barrels of chops. The capital stock will be about \$65,000.

At a meeting of the County Farmers' Alliance held at Montpelier, Dak., May 30, money was raised to build a warehouse and elevator. They will erect new elevators at Carrington, New Rockford, Valley City, and probably at Sykestown, Montpelier and Jamestown.

The annual statement of the affairs of the C. P. R. R. Company shows that their grain elevators at Fort William, Port Arthur, Owen Sound and Montreal earned a satisfactory dividend, notwithstanding that they were largely used for the special purposes of the owners.

General Manager Cardin, of the Northern Pacific Elevator Company, has recently been to the Pacific coast for the purpose of inspecting the crops of that section, and reports a remarkable increase in the soft wheat acreage, though the yield may fall a little short.

George L. Dunlap of Chicago has sold a controlling interest in the Wabash and Indiana Elevators to John Hurd and Russell Sage, who will act as trustees until arrangements are completed, when the houses will pass into the control of the Chicago Elevator Company.

Mr. George D. Ellis of Fargo, Dak., has recently completed a buggy trip through Ransom and Sargent counties of that territory, and reports an increase of fully 15 per cent. in the acreage of those counties as against last year, and a prospective gain of fully 10 per cent. in yield.

C. Manegold & Son of Milwaukee are building a grain elevator and flour storage house adjoining their mill in this city; when completed it will be 40x150 feet and five stories in height. As the river runs in the rear of their plant, their facilities for handling grain and flour are unexcelled.

The City of Chippewa Falls, Wis., was struck by a plague of chinch bugs on the afternoon of June 11, and by five o'clock they were so thick in places that they seemed to form one solid mass. They infested that section last year and the farmers hoped to escape them this season.

Superintendent Whyte of the C. P. R. R. Company has lately visited a large number of elevators in the Northwestern states with a view of finding out all the latest improvements and incorporating them into the large new elevator which the company is about to build at Fort William, Ont.

Western grain shippers have been notified that the Fitchburg road will, on July 1, have their new elevator at Rotterdam Junction, N. Y., open for business. The elevator was built at a cost of \$125,000, and it is expected that it will greatly increase the grain traffic over the Fitchburg road.

A dispatch from Toronto, Ont., dated June 6, states that the first transshipment of the grain stored at Duluth during the past season passed through that port June 4 over the C. P. R. R. for the Eastern markets. There were over twenty heavily laden cars, and the entire train was devoted to wheat.

The case of Matthews, McFarlane & Co., grain dealers and owners of the Continental elevator, a bonded warehouse at Oswego, N. Y., against whom complaint was made that they removed barley from the elevator without paying duty on the same and with intent to defraud the government, has been investigated by the treasury depart-

ment at Washington. As a result the Secretary has directed that government surveillance be removed from the elevator and that its former relation with the department be restored. This decision acquits Matthews, McFarlane & Co. of fraud and attempted fraud.

The rumor that F. H. Peavey of Minneapolis, and A. J. Sawyer of Duluth, Minn., would consolidate their elevator interests is denied by both these gentlemen. Mr. Sawyer, however, admits that in his opinion the scheme is a good one, as a consolidation of interests would reduce expenses and consequently increase dividends.

Simpson & Robinson, elevator contractors and builders, Minneapolis, Minn., have contracted for a number of elevators to be built on the Watertown Division of the C. & N. W. Ry. Five are at present contemplated, but it is rumored that they will increase the number to fifteen. This is the biggest "plum" of the season so far.

P. C. Pettingill of Glencoe, Ont., was arrested at London, Ont., a few days ago on complaint of Peter McDonald, representing the Buffalo International Grain and Stock Exchange, on a charge of embezzlement. Mr. Pettingill had charge of the Glencoe bucket shop which closed recently, and is charged with being \$425 short.

A large consignment of Russian grain, including wheat, oats, barley and winter rye, has been received at Ottawa, Ont., and will be planted throughout the Canadian provinces this season. Some of the samples come from the extreme northern limits of the grain growing region of Continental Russia, and will be tested at the experimental farms.

G. A. Snook, an extensive grain dealer at Moawequa, Ill., failed May 23 for several thousand dollars. He purchased a ticket for Vancouver, B. C., and has skipped the country. Eight or ten attachments have been sworn out on the grain that was stored in the elevator. Many farmers will lose heavily. V. Snyder & Co., bankers, hold a mortgage on the elevator.

W. L. Wheeler, manager of a bucket shop at Port Huron, Mich., should pose as a wingless angel. He advanced margins on his customers' deals out of his own funds, and when the customers lost they repudiated the obligations and Mr. Wheeler was left with a large "l." This is probably the first case of the kind on record where the customers got the best of it.

The Russell Miller Milling Co., having large roller mills at Bismarck, Jamestown and Valley City, Dak., will build a line of elevators in Northern Dakota for their own use, and thereby save the profit heretofore made by the regular elevators. A 5,000-bushel elevator for mill use will be erected at once at Jamestown, and one of the same capacity at Valley City.

The Santa Fe Elevator & Dock Company is constructing an elevator on the Illinois & Michigan Canal, 1500 feet west of Ashland avenue in this city. It will be 90x139 feet, six stories high, and cost about \$300,000. It will be one of the best constructed houses in the country, and will have a capacity of 1,600,000 bushels of grain. It will be operated in connection with the Atchison Road. Architect McLennan has the plans.

The Winona Mill Co. of Winona, Minn., has purchased the large elevator in erefts of Stokes Bros. at Watertown, Dak. The purchase includes eight elevators, located respectively at Doland, Mansfield, Hackley, Ludden, Raymond, Columbia, Houghton and Oakes. This gives the Winona Mill Co. a chain of forty-six elevators and warehouses. Three new elevators will be erected at once, one at Dempster and one at Oshawa. The location of the third has not yet been decided upon.

An ingenious fraud was lately practiced upon a number of farmers in St. Peters Parish, Ont., by a brace of grain swindlers. The rustics signed an agreement to sell 200 bushels of oats to some parties, and this document when the upper and lower ends were torn off left a promissory note in which the word dollars appeared in place of bushels. When the cases came up for trial they were decided in favor of the grangers, the court holding that where the mind did not go with the signature in a promissory note the person signing was not liable.

William Townsend of Rockville, Neb., who for a number of years has been engaged in the grain and agricultural implement business at that place, absconded recently leaving behind him a number of creditors who trusted "not wisely but too well." He sold his elevator and mortgaged his home at Rockville, disposed of other business interests and then skipped out. It seems to have been a premeditated steal, and when overtaken he will undoubtedly be handled without gloves by his creditors. His liabilities are estimated at \$15,000; assets \$5,000.

D. A. Tompkins of Charlotte, N. C., is widely known throughout the South owing to his connection with the Southern Cotton Oil Company, which was organized last year to fight the American Cotton Oil Trust, a branch of the Standard Oil Company. Mr. Tompkins was made chief engineer and assistant general manager of this new company, whose organization was chiefly due to his individual efforts. Eight mills, with an average capacity of 200 tons per day each, were planned and constructed in one summer, and the following fall were started up and worked satisfactorily in each case. As a result of the organization of this company the South sold during the season of 1887-88 probably 600,000 tons of cotton seed at an average price of \$3 per ton more than was paid the season before, and in round numbers the planters received about \$2,000,000 more than could have

been obtained had not Mr. Tompkins organized this new company. This was probably the largest project ever undertaken and carried out in this country in the same length of time, and yet it was the work of a young man but thirty-four years old, born and raised in the South.

Lewis W. McGlauffin, commission merchant and grain dealer, San Francisco, Cal., made an assignment June 1. He had overdrawn his bank account, and had been notified to settle, owing to a change in the management of the bank, and this sudden notice in the face of an advancing market which had already increased from \$3 to \$4 a ton on grain, and lack of rain made it impossible for him to meet his obligations and no resource was left but an assignment. His total liabilities foot up \$50,000; assets about the same. The suspension is only temporary, and he hopes to resume business soon.

The San Francisco Grocer and Country Merchant discourses as follows in regard to the grain bag situation: "The supply of bags, about 45,000,000, is known and admitted by all parties to be considerably more than will be required for consumption this season. The largest estimates of actual needs do not exceed 35,000,000, and this, based on the consumptive demand of previous years, is fully 5,000,000 more than will be required. Still, with a surplus of 15,000,000, there is a possibility of those shorting the market at apparently safe figures being heavy losers. The combination now interested in pushing the market upward is understood to have control of about 25,000,000 bags, which places it in a strong position to name figures unfavorable for the shorts on buyer June and July contracts. If the market is shorted to any great extent, the combination can well afford to advance prices and maintain the advance, for the profits thus realized by squeezing the shorts—as well as by taking advantage of consumers in the midst of the harvest, when the demand is most active—will enable the combination to take care of the entire surplus and carry the same into another season at a low and profitable figure."

A dispatch from Tacoma, Wash. Ter., says: Tacoma has a possible scope of country to pay it tribute in the shipment of grain that extends to and includes the western part of Dakota, all Montana, Idaho and Washington Territory. All surplus grain raised in these sections, if it finds a European market, must now come via Tacoma and thence out by the Pacific Ocean. All the unsold grain in the belt is now fast finding a market this way, and now that the great expense of hauling grain up and over a great mountain is to be dispensed with, the increase in shipments via Tacoma and the Pacific Ocean will astonish America. This is already shown in the number of vessels loading here. Last year if six to eight ocean steamers were loading at the Tacoma wharves it was a subject of observation. But this number at the present time would suggest a dearth of business. The wharves are a busy scene now. As many as twenty-two ocean sailing vessels and nineteen steamers have been loading here in one day, and the daily average of vessels loading will be fifteen to eighteen. The mistaken notion prevails that the depth of water in the sound in front of the city is a barrier to the safe anchorage of vessels in this bay. The traducers of Tacoma would never advance this idea before their hearers while in this city, for at any hour of the day or night in any day of the year there are vessels of all kinds, from the largest sailing freight-carrying vessel to the smallest known craft, safely anchored or resting in these waters.

GRAIN SHORTAGES.

The last fleet from Duluth developed some monstrous grain shortages. At first there was a disposition to keep the fact quiet, tallymen not being anxious to confess their inability to find the grain said to have been loaded for them at the other end of the route, but when it was announced that the propeller Iron Duke was 1,183 bushels short, an amount scarcely ever equaled here, other bad shortages were given away. The propeller M. M. Drake was 53 bushels short, the schooner Nelson 171 bushels, the propeller Ira H. Owen 230 bushels, the P. P. Pratt 81, and the Mecos a 461 bushels. Here is a total of 2,179 bushels discrepancy on six boats, and there is probably more unreported. Valued at 90 cents a bushel, for which an overrun was sold this week, it will cost the vessels pretty nearly \$2,000 to pay for what somebody else is accountable. But this is business. An effort will be made to recover the Iron Duke's lost grain, and it may be found to be a clerical error.—*Marine Record*.

TWINE.

The *Scientific American* says that few people have an idea of the enormous consumption of twine in this country. The farmers use 35,000 tons annually upon the self-binding harvesters. Allowing five pounds to the mile, this would equal a string long enough to go more than six times around the earth. The twine generally used for this purpose is made either of sisal or manilla hemp. The sisal is the cheaper material, but not so strong and durable as the hemp, and makes the farmer more trouble by breaking every little while. Still he continues to use it, as he pays a cent or two less for it, and does not charge up the lost time in repairing breaks. About 1,200 feet of twine per acre is required, which costs about 25 cents.

Leopold Steiner, a member of an extensive corn firm in Pesth, has absconded after forging bills to the amount of 500,000 florins. All of the Pesth banks are sufferers.

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HARLEY B. MITCHELL, - - - Editor.

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This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., JUNE 15, 1888.

EXPORTS OF BREADSTUFFS.

The report of the Bureau of Statistics at Washington, issued June 9, for the month of May, 1888, shows a decrease in corn, oats, rye and wheat, as compared with the same month in the previous year. The total value of the breadstuffs exported during May, 1888, was \$7,462,051, against \$13,181,877 for the same month in 1887. The value of the exports for eleven months ending May 31, was \$116,156,121, against \$145,400,354 for the eleven months ending May 31, 1887.

The exports of corn for the month of May, 1888, were 2,360,681 bushels, against 2,480,451 bushels for the same month in 1887. The amount of wheat exported during the months named was 1,983,849 bushels in May, 1888, against 8,879,226 bushels in May, 1887. There were 17,743 bushels of oats exported in May, 1888, against 19,188 bushels in the same month of 1887. The exports of rye were 20,045 bushels in May, 1888, against 90,982 bushels for the same month in 1887.

ELEVATOR CONSOLIDATION.

It has been rumored in Minneapolis for the past few days that a big elevator consolidation was on foot which would embrace at least two, and possible more, of the largest elevator lines in the Northwest. The elevators supposed to be in the move are those of A. J. Sawyer and F. H. Peavey & Co. These comprise about 125 houses on the Northern Pacific and Omaha roads. It is supposed that the plan is to unite these houses and others under one management. Sawyer already has extensive terminal facilities both on Lake Superior and at Buffalo, so that wheat could be laid down to Eastern millers at a minimum cost. That Eastern millers are glad to get their wheat in this direct manner, is proved by the experience of last season, when the kick was raised about the inspection of wheat at Washburn, which it was claimed was not up to the Duluth standard, and which was nevertheless sold to Buffalo millers at a price above the market.

Consolidation and combination seem to be the order of the day. The Nebraska combination, or rather consolidation, is doubtless only the first of a number that will be formed. Nearly every business is discovering that co-operation is the only cure for excessive competition, and that large associated interests can be carried on with less trouble and expense than many minor ones. In

fact, the tendency in the Northwest has been in the direction of large lines of elevators under one management for many years. That still greater consolidations should occur is only to be expected.

THE SITUATION IN NEW YORK.

The elevator men both of Buffalo and New York, have declared that the passage of the McEvoy Elevator Bill by the Legislature and the attaching to it of the Governor's signature, means that their business must stop unless the law can be evaded. On June 14 the elevating companies of Buffalo issued a new rate-card to the effect that the charge for elevating, receiving, weighing and discharging sound grain will be five-eighths of one cent per bushel, "the above charge to be paid by the consignee of the grain. No grain will be received for transport." Of course this last means that all grain must go into store and pay one-eighth of a cent per bushel for ten days' storage or part thereof. Vessel owners say that their purpose is to pay nothing for elevating. One question to be disposed of is the shoveling charges. The vessel now pays from \$3.50 to \$4 per thousand bushels, on a bill presented by the elevator authorities "for the boss scooper," and the elevator and scoopers divide the amount. The new law cuts down this charge to actual cost.

In New York City the whole matter was referred to a special committee made up of shippers, receivers and elevator men, who reported a plan which it is thought will evade the law. The McEvoy Law fixes the rate at five-eighths of a cent per bushel, or \$6.25 per thousand bushels. This the elevator men claim is simply prohibitory, and they threatened to shut down. The committee in its report states that in addition to the \$6.25 per thousand bushels the following rates must be charged: For canal boat trimmings, \$1.50; for trimming ocean vessels, \$2; and for the transportation of the elevators, one-half cent per bushel, or \$5 a thousand. This will bring the entire cost of handling 1,000 bushels up to \$14.75.

Of course, it is impossible to see what the outcome of all this will be. It is stated that both the Buffalo and New York elevator men are acting in accordance with the best legal advice obtainable, and it is possible that the McEvoy Law is not flawless. It is to be hoped, however, that the bill is strong enough to bring the Buffalo ring to its senses.

THE CHANCES FOR WHEAT.

Perhaps the best of all the estimates for wheat this year are those of the *Cincinnati Price Current*; at least they harmonize best with what we hear and read in disinterested quarters. This authority says that the chances of the entire crop, winter and spring, range as low as 375,000,000 bushels, and as high as 400,000,000 bushels, and it is disposed to accept 385,000,000 bushels as a fair approximation. Of this amount 150,000,000 is given as the probable outcome of the spring wheat crop, though, of course, this is largely conjecture. Proceeding to details, the *Price Current* says: By taking an average of the five years, 1883 to 1887 inclusive, the indicated average this season would be 10.33 bushels per acre, or 232,115,000 bushels, equal to 60,715,000 less than last year.

The following compilation shows the reported condition of winter wheat on June 1 and July 1 (the latter being a date on which considerable of the crop had reached maturity, or was harvested) for five years, with the average yield per acre, and what 100 would mean in bushels on the basis of ratio between the June 1 condition and the indicated yield, as computed by the *Cincinnati Price Current*:

	1887.	1886.	1885.	1884.	1883.
June 1 condition	84.9	92.7	62.0	93.0	75.0
July 1 condition	83.5	91.2	65.0	94.3	79.0
Yield, bushels per acre	12.1	12.3	9.6	12.6	10.8
100 condition in bushels	14.2	13.3	15.5	13.5	14.4

The *Price Current* adds that in the light of special information received from a large portion of the winter wheat area, and careful consideration of available reports from other districts, the

73.3 average of condition seems to reflect a high estimate, rather above the actual merit of the position of the crop, but it may be justified by information more complete than it has had. The present situation may be regarded as indicating a production of 225,000,000 to 230,000,000 bushels of winter grain, against 293,000,000 last year—say 65,000,000 bushels deficiency.

In regard to spring wheat, our contemporary says: "The spring wheat crop of 1887 averaged 12.2 bushels per acre; the average for five years is 12.9 bushels, during which period the highest yield was 14.1 in 1884; previously as high as 15.9 was indicated for 1877, following the low point of 8.2 in 1876. If this season's crop should average 12 bushels the production would be 160,000,000 bushels—which is all that can reasonably be counted upon, under fairly favorable conditions, and 150,000,000 probably is a more justifiable approximation."

THE ANTI-CORNER RULE.

The Chicago Board of Trade has repealed the so-called Anti-Corner Rule. To some this might appear an invitation to market manipulators to come in and forestall the market, if they could. But such is not the case, by any means. The great majority of the men who are opposed to the anti-corner rule are the grain receivers. They oppose it, not because they want to see corners run, but because Chicago is quite enough of a bear market from other causes, without attempting to definitely throttle the "bulls" by adverse legislation.

And there is good reasoning in their arguments, too. Grain dealers here and all through the country that deals with Chicago, complain of the bear raids on the markets. A large part of the world sells short in Chicago; the elevator storage charges have been and still are high, and here is a bear influence quite strong enough for any market to withstand. The undoubted bear influences at work in Chicago are quite sufficient to encourage periodical bear raids, and if the Board of Trade cannot stop the raids, it should at least leave the bulls unfettered. The repeal of the law was a good thing.

THAT there is gambling on the Chicago Board of Trade, nobody will deny; but aside from trading which many call illegitimate, the merchants of the Board annually handle \$400,000,000 of produce, which is a pretty fair showing.

A PRESS of matter has compelled us to lay over until next month a number of interesting articles intended for this issue but received too late for insertion. We believe the present number is a very creditable closing for our Sixth Annual Volume; but we have no hesitation in promising a better paper for the future.

THE Buffalo Underwriters make a reduction of ten and ten in short term insurance risks on grain elevators and on Board vessels and canal boats. The elevator men demand a reduction of three tens, amounting to a reduction of 30 to 40 per cent. on the regular short rate premiums. In order to meet this demand and secure business, it is charged that agents have resorted to all kinds of dishonest schemes, as far as the interests of the companies are concerned.

THE Chicago Board of Marine Underwriters have refused to write grain in vessels of class A2½, and have referred all such risks to general agents for special rates. It is understood that this amounts to an advance of 20 per cent. in insurance on grain in the vessels that come under this classification. The Board of Marine Underwriters have been steadily raising the classes of vessels that can command board rates, and the result of this latest move will undoubtedly be to drive some of the small schooners out of the grain trade, which at best this year is unprofitable.

Editorial Mention.

C. C. WOLCOTT, President of the Scandinavian Elevator Company, Minneapolis, will remain in Europe until about the first of August.

STATISTICIAN Prime says that no positive statements as to the spring wheat crop ought to be made yet, except that the crop is very short and backward, fully a month later than usual. Statistician Dodge says the returns indicate about thirteen bushels per acre for spring wheat.

ONE day the past week the private grain warehouses of Chicago contained 720,000 bushels of wheat and 100,000 bushels of oats. The Union Elevator of Joliet at the same time held 175,000 bushels of wheat. These are items showing the incompleteness of the usual "visible supply" compilations.

THE improved and successful wagon dump for grain elevator companies, manufactured by Paige Mfg. Co., Painesville, Ohio, and sold by G. W. Crane, Minneapolis, is reported as being in great demand, a large number being already placed this season. An application has been filed for a patent.

BRADSTREET's figures up the wheat stock east of the Rockies on June 1, at 39,020,333 bushels, with 7,793,000 bushels on the Pacific coast. The stock of corn, according to Bradstreet's in sight on June 2, was 10,184,215 bushels; of oats, 7,224,873 bushels; of rye, 266,208 bushels; barley, 527,366 bushels.

A VERY fine catalogue and price list for 1888 has just been issued by H. W. Caldwell, of 131 and 133 West Washington street, Chicago. The Caldwell Conveyor and other specialties which have made Mr. Caldwell's name familiar to the grain handling and milling world, are illustrated and briefly described. All who wish a copy can receive one by applying to Mr. Caldwell for it.

MESSES. THORNBURGH & GLESSNER are the selling agents for the Triumph Machine Belting and carry a full stock at their warehouse, 18 to 22 North Clinton street, this city. They will be glad to mail samples and prices to all who desire them. This is a first-class belting for all kinds of work, and is highly recommended by those who have used it.

THE JEFFREY MFG. Co. of Columbus, Ohio, report as having plenty of orders for their elevating machinery and drive chains. They will manufacture, in addition to their present specialties, the Willson Spring Whiffletrees, which are designed to relieve the laboring horses from their burdens. Parties interested in any of these would do well to correspond with this firm.

ON June 1 the firm of P. L. Wright & Co., commission merchants of Detroit, Mich., was dissolved by mutual consent, Mr. P. L. Wright retiring. The remaining partners, C. W. Baird and F. West, continue in the business with the same connections as heretofore, under the firm name of Baird & West. The new firm has our best wishes for continued prosperity.

SCIENTISTS announce as a startling fact that in the course of time, how long they do not pretend to say, there will be great changes in the water surface of the earth; among these changes are the exhaustion of the water in Lake Michigan, and the running dry of Niagara. If the day had been set, upon which the catastrophe is to culminate and the people of Chicago instead of gazing upon a blue expanse of water, will see nothing

but an immense, dry basin, and in place of the limpid Chicago River, only a dirty ditch, we might feel inclined to moralize upon the subject, but as several centuries will probably elapse before that day, we leave the moralizing for somebody else to do.

H. SANDMEYER & Co. of Peoria, Ill., well-known to the grain trade, also build an excellent furnace, the "Pleasant Home Furnace," a catalogue of which we have just received. The "Pleasant Home" appears to be a vast improvement on the styles of furnaces in common use. The average furnace is a snare and a delusion, unscientific and unsatisfactory. The furnace made by Messrs. Sandmeyer & Co. overcomes a large number of the defects of the ordinary style of furnace.

A BUFFALO correspondent to an exchange wants to know how the Scandinavian Elevator Company will give Buffalo from 20,000,000 to 30,000,000 bushels more of grain to handle than at present, when the wheat necessarily goes to Buffalo, anyhow. He also denies that Minneapolis has any advantage over Buffalo, as far as regards getting good wheat for milling, and protests that the Duluth article that gets to Buffalo millers is superior to the article which gets to the Minneapolis mills.

THE farmer has for once come out ahead. This one lives in Plymouth, Mich., and bought seed wheat from an Ohio seed company at \$15 a bushel, the company agreeing to buy back from the crop raised by the farmer twice as much wheat as they sold him. The company afterward failed, and the contract was not carried out, and a note given by the farmer for \$150 turned up in the hands of an outsider. He refused to pay and suit was brought, but the jury returned a verdict in favor of the farmer.

WEBSTER & COMSTOCK MFG. Co. of this city have just issued a very handsome annual catalogue, illustrating and describing their large list of mill and elevator specialties. It contains over 120 nicely printed pages, and is bound in imitation embossed leather, giving it a unique appearance. It has an index, something every catalogue should have, and is creditable to the excellent firm that issues it. Readers can obtain a copy by addressing Webster & Comstock Mfg. Co., 125 and 127 Ontario street, Chicago.

THE firm of A. J. Hoskins & Co., Minneapolis, Minn., dealers in grain, fuel and lumber, is a new firm consisting of A. J. Hoskins, for many years at the head of the financial department of the business of Cowgill Bros. (the well-known elevator men of La Crosse and Minneapolis), and J. F. Bassett, a gentleman of over thirty years' successful experience in the grain business, and F. S. Hoskins, well-known in railroad and financial circles, making one of the most promising business firms recently started in the Northwest, and one which is much appreciated by the friends of the members of the firm.

THE Inter-State Commerce Committee met in New York, June 13, to hear the complaint of the New York Produce Exchange against the Western roads for which New York is the Eastern terminus, concerning the export rates on grain. These roads are charged with unjustly discriminating against New York and in favor of the foreign merchant in the matter of transportation charges. It is claimed that the English merchant can buy a barrel of flour in Chicago, and have it delivered in Liverpool or Glasgow cheaper than the New York merchant can get it. In the course of the arguments Commissioner Fink, who was present as a witness, dropped a hint as to the way in which the railroads evade the law. He said there were ways of keeping within laws and still cutting rates. One way was to go to a shipper and tell him that so much would be paid him to ship by a certain line, which was equivalent to a rebate. Commissioner Schoonmaker asked what

roads were doing this, but Mr. Fink replied that he did not care to state the name of any road until he had investigated the matter. The subject is of serious interest to the New York grain men who say if present rates are continued, it will virtually close up New York as an export port.

WE regret to record the death of Mr. Wm. H. Trafton, who since 1854 has been the editor-in-chief of the *New York Produce Exchange Reporter*. He has also made a wide reputation as the commercial editor of various daily and weekly papers, among them the *New York Tribune*, *Sun*, *Evening Post*, and *Philadelphia North American* and various other journals at home and abroad. Mr. Trafton was born in 1818, at South Berwick, Maine, and died in New York May 30. His extensive knowledge of commerce and political economy rendered him a valuable adviser and counselor in business relations, and his loss will be greatly felt.

THE heavy charges for trimming grain in this city have led to a speck of war. In one instance non-union men were employed at a saving of one-half the rates demanded by the Grain Trimmers' Union. In another case two propellers topped off with cargoes 3,000 and 5,000 bushels short rather than pay the trimming charges. This they could afford to do, as freights are low, and they saved the charge of \$1.50 per thousand bushels, which amounted in the two cases mentioned to a saving of over \$300, an item worth looking at by boatmen just now, as the freight is only lost on a few thousand bushels and the trimming saved on the whole cargo.

ATTENTION is directed to the advertisement in this issue of the Druid Fabric Roofing and Druid Elastic Paint. The former is for roofs of all kinds, sheathing, etc., its base being a fabric, and the use of paper being entirely discarded. The Druid Elastic Paint is for iron, metals and wood, felt, etc., and any one can apply it. It is proof against fire, water, weather or acid, and is an excellent varnish paint to use in cases when it is desired to resist the oxidizing influence of the air, moisture or acids. Both these articles have given great satisfaction, as numerous testimonials indicate; and the advertisers, Messrs. Geo. B. Carpenter & Co., 208 South Water street, Chicago, will be pleased to submit the claims of both these articles to interested parties.

It will be noticed from the advertisement on our first cover page that the firm of Howes & Ewell has been succeeded by S. Howes, who is now sole proprietor of the "Eureka Works" at Silver Creek, N. Y. The establishment of the Eureka Works dates back thirty-two years ago, and Mr. Simeon Howes, the surviving partner of the firms of Howes, Babcock & Co., Howes, Babcock & Ewell, and Howes & Ewell, has seen the business increase from twenty machines a year to over 2,000 a year. The only change in the business is the purchase by Mr. Howes of the late Carlos Ewell's interest. The business will be conducted in the future, in every respect, as in the past, with the best wishes of the host of friends which the Eureka machines have made everywhere.

THE stocks of grain in Chicago elevators Saturday evening, June 16, were 4,815,250 bushels of wheat, 6,973,387 bushels of corn, 1,821,341 bushels of oats, 48,638 bushels of rye, and 38,495 bushels of barley. Total, 13,697,111 bushels of all kinds of grain, against 23,014,146 bushels a year ago. For the same date the secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 25,220,925 bushels of wheat, 12,458,233 bushels of corn, 5,763,501 bushels of oats, 240,124 bushels of rye, and 180,385 bushels of barley. These figures are smaller than the corresponding ones a week ago by 532,084 in wheat and larger by 1,352,815 in corn. The visible supply of wheat for the corresponding week a year ago decreased 804,005 bushels.

Fires, Casualties, Etc.

J. H. Rogers of the firm of J. H. Rogers & Son, grain dealers, Dunlap, Ill., has died.

J. W. Egan & Co., grain dealers, Philadelphia, Pa., were burned out recently. Loss \$5,000.

Charles H. Hummell's feed mill at Erie, Pa., was destroyed by fire a few weeks ago. Loss \$8,000.

An elevator at Mapleton, Dak., containing 25,000 bushels of wheat, was destroyed by fire June 2.

E. B. Seymour, a prominent grain dealer of Buffalo, Wis., died at his home in that city a short time ago.

A grain elevator at Shane's Crossing, Ohio, was unroofed by a cyclone which struck that place May 27.

The N. Thomas Brewing Co.'s plant at Dayton, Ohio, was totally destroyed by fire May 12. Loss \$60,000.

The buildings of the Mill Creek Distillery Company at Cincinnati, Ohio, were partly destroyed by fire June 9, entailing a loss of \$75,000.

William Henderson's large flour mill and grain warehouse at Iona, Ont., were totally destroyed by fire May 25. Loss about \$10,000; partly insured.

White Bros.' elevator at Norborne, Mo., burned May 23. The fire is supposed to have originated from a hot journal. Loss, \$14,000; insurance, \$8,000.

John Danschak, a boy sixteen years of age, was struck on the head and badly cut, June 7, by an elevator prop in J. E. Bell & Co.'s warehouse at Baltimore, Md.

The Rodney Cotton-seed Oil Company's mill at Rodney, Miss., was recently destroyed by fire, entailing a loss of \$50,000; insurance \$10,000. It will be rebuilt.

The warehouse connected with the St. Anthony elevator at Alexandria, Minn., burst May 27. It contained 30,000 bushels of wheat. The building is a total wreck.

The warehouse at Lake City, Mich., owned by Messrs. Labor & Cornwall, was destroyed by fire June 14. The loss was \$3,800. The origin of the fire could not be ascertained.

The warehouse of Robert Cochran at Trinway, Ohio, containing three thousand bushels of wheat, was blown down in a terrible storm which swept over that section of the country May 28.

The Newaygo grain elevator at Casnovia, Mich., was totally destroyed by fire May 12. Loss \$2,000; no insurance. The building is supposed to have caught fire from a passing locomotive.

Lightning struck Churchill & Son's grain office at Chenoa, Ill., May 31, tearing off the siding but doing very little damage. This is the second time their office has been struck by lightning.

A large steam elevator at Baxter, Iowa, owned by McFarland & Regner, and containing 3,000 bushels of grain, was burned May 31. Nothing was saved from the building except about fifty sacks of oatmeal.

During a heavy thunderstorm June 8, the George H. Christian elevator at St. Thomas, Dak., was struck by lightning and burned to the ground, together with 3,000 bushels of wheat. Loss about \$8,000. Insured.

The elevator owned by the Chicago & Iowa Railroad Company at Rochelle, Ill., was burned with its contents June 4. Loss \$10,000; there was \$500 insurance on the grain. The elevator was operated by E. F. Brownell.

Mr. H. D. Cunningham, ex-mayor of Ridgeway, Ont., a prominent grain merchant, well-known throughout Canada and the States, died suddenly June 10 of Bright's disease. His death is generally lamented. He leaves a large family of children.

The feed mill owned by Archie Orr, near La Porte, Ind., was destroyed by fire June 12. Mr. Orr was so badly burned while trying to save some property that it is feared he cannot recover. In case he does he will be a cripple for life. The loss is estimated at \$1,200; partly insured.

John W. McClung, one of the early pioneers of St. Paul, Minn., died at his residence in that city May 27 of congestion of the stomach. He was elected a director of the Chamber of Commerce in 1871, and was re-elected every year up to the time of his decease.

The mills and elevators at Noblesville, Ind., owned by J. L. Evans, were almost entirely destroyed by fire June 12, involving a loss of from \$40,000 to \$50,000. McMillard & Dark of Indianapolis carried an insurance on the property, amounting to \$43,000, in thirty-seven companies.

C. P. Merriman for many years a prominent citizen of Bloomington, Ill., and subsequently a resident of Chicago, died in the latter city May 24. He was the founder of the Bloomington *Pontograph* and was at one time engaged in the grain business in that city in partnership with his father-in-law, Major T. T. Waggener. They had the misfortune to be burned out and Mr. Merriman

sacrificed all his worldly means to meet his obligations. He was twice mayor of Bloomington and was very influential and active in politics.

A terrible double fatality occurred at Orion, Ill., May 25. Two boys, Henry Holberg and Lennie Johnson, each about fifteen years of age, who were playing in one of the oat bins of the R. I. & P. R. R. Co.'s elevator, were covered with grain and suffocated before they could be extricated.

The large grain elevator at Pulaski, Iowa, owned by Miller & Newman, was burned with its contents May 18. There were about 200 bushels of wheat, 150 bushels of corn and some timothy seed in the building. Estimated loss \$2,000; insurance on the building \$800. The fire is supposed to have been of incendiary origin.

A fire broke out in the grinding mill of the Schlitz Brewing Company at Milwaukee, Wis., May 22, which threatened for a time to spread to the large malt house. The fire originated from an explosion of dust. The loss on the machinery and contents is about \$3,000, and on the building \$1,000; it is fully covered by insurance.

The Farmers' Elevator at Aberdeen, Dak., was destroyed by fire, with its contents, June 7. The loss on the building was \$5,000; insurance, \$3,500. Binding twine to the value of \$5,000, and owned by Wm. Deering of Chicago, was stored in the building; insured at \$2,000. Two thousand bushels of wheat were also destroyed.

Jacob Ross, a boy about ten years of age, was smothered to death in Haynes, Gordon & Co.'s elevator at Ocoya, Ill., May 22. It is supposed that he was playing around the elevator and fell asleep; when the workmen spouted the corn out of the elevator into the cars his leg and foot came out of the spout. They cut a hole in the building to get him out, but he was dead before they could reach him.

Wesley Davis, a boy about twelve years of age, was smothered to death in a corn bin at his father's elevator at Plattsmouth, Neb., Jun. 8. He fell off a plank into a bin filled with shelled corn, and the workmen not knowing that he was in the bin, opened the chute at the bottom. He was carried downward to the chute where his body lodged, stopping the passage of the grain. He died soon after being rescued from his horrible position.

THE RIVER AND HARBOR BILL.

The total increase in the River and Harbor Bill, as reported to the Senate, is \$1,500,000. Some details are as follows: Improvements of the Mississippi River from the Des Moines Rapids to the mouth of the Illinois, \$135,000; Grand Rapids near Mount Carmel, Ill., \$50,000; snag and dredge boats on the Upper Mississippi, \$15,000; from Minneapolis to the Des Moines Rapids, \$500,000. The appropriation for the Mississippi between the mouth of the Illinois and the mouth of the Ohio is amended by the insertion of a provision that work shall include work on the harbor at St. Louis.

Provision for the Missouri River is struck out, and the following substituted: Improving the Missouri River from the mouth to Fort Benton, continuing improvement, \$1,050,000; including the removal of obstructions, surveys and examinations, together with office expenses and salaries of the Missouri River Commission, to be expended in accordance with the plans of the commission. So much of the sum as the commission may deem necessary may be expended at Atchison and Fort Leavenworth, Kan., and in preserving or improving existing work at Kansas City and St. Joseph, Mo., and \$5,000 may be used between the southern limit of St. Joseph and the head of Lake Contrary. Out of the above sum \$150,000 shall be expended between Council Bluffs and Omaha, and a point five miles above the bridge of the Omaha and Council Bluffs Bridge Company; \$100,000 at Sioux City; \$50,000 at or near Plattsmouth; \$50,000 at or near Rulo, Neb., and \$75,000 at or near Nebraska City.

Following is the Hennepin Canal provision: For the purpose of securing a continuous navigable waterway between Lake Michigan and the Mississippi River having capacity and facilities adequate for the passage of the largest Mississippi River steamboats and naval vessels, suitable for defense in time of war, the Secretary of War is authorized and directed to cause to be made plans and estimates for channel improvements and locks and dams in the beds of the Illinois and Des Moines rivers from La Salle to Lockport, so as to provide a navigable waterway not less than 14 feet deep, and to have surveyed and located a channel from Lockport to Lake Michigan at or near Chicago, such channel to be suitable for the purposes aforesaid, and capable of carrying not less than 600,000 cubic feet of water per minute, flowing at the rate of two miles per hour, necessary expenses of such surveys, plans, etc., to be paid out of the sum appropriated for the improvement of the Illinois River. The Secretary is further directed to cause to be located on such line as he may approve, a canal from the Illinois River at or near Hennepin to the Mississippi River, at or above the mouth of the Rock River, together with a necessary feeder for the same, the canal to be known as the Illinois and Mississippi Canal, and to be eighty feet wide at the water line and to have a depth of not less than seven feet of water with locks 170 feet long and thirty feet wide. The Secretary of War shall cause to be made and submitted to Congress detailed plans and estimates for construction of the canal and feeder, necessary expenses to be paid out of the unexpended balance heretofore appropriated for the survey of said canal.

ITEMS FROM ABROAD

South Australia shipped over 50,000 tons of wheat in March, the largest amount on record for one month.

Though the present duty on wheat imported into France is equal to 26½c per bushel, a bill has just been introduced into the French Parliament to double it.

Exports of wheat from India since April, aggregate 5,300,000 bushels, of which 3,600,000 bushels went to the Continent, and 1,700,000 bushels to the United Kingdom.

Reports from Chili say that granaries in the South are full of grain which will have to come on the market sooner or later, but a great deal of the wheat has suffered this season from bad weather and the quality is not up to No. 1 standard. The recent harvest was below the average as to quantity.

France has twice during the past few years increased her tariff on imports of wheat and flour. As a result the price of wheat bread has become too high for the poorer people to purchase it, and rye bread is used instead. The French are now consuming at the rate of about 3,500,000 bushels yearly less wheat, and the same number of bushels more rye than in 1886.

Forty years ago the United Kingdom raised about 160,000,000 bushels of wheat per year, and was an exporter of breadstuffs. The import duty on wheat by the English laws of 1828 was fixed at \$1.10 per bushel when wheat in the English market was \$1.53 or under, and was 96 cents per bushel when it was \$1.54 to \$2.00, and 3 cents per bushel when the price was \$2.20 and over.

The London *Times* correspondent says, the great Russian Railway in the heart of Asia is at last a fact, and you can now go from London almost to the boundary of the Chinese Empire in twelve days. This will open up a territory which has hitherto been inaccessible except by caravan, and which comprises an immense wheat tract in addition to vast mineral and other undeveloped resources.

Wheat and other grain is now regularly carried by passenger steamers from New York, both to Liverpool and London, at nominal freights; or in other words for nothing. Advocates of free imports of foreign corn must admit that such a state of things was never foreseen or contemplated by Cobden, when maintaining that free trade in corn would not injure British and Irish farmers. —*Mark Lane Express.*

A "corner" in corn is engaging public interest in Austria. It is estimated that 3,500,000 hundredweight have been bought up, involving a venture of 1,500,000 florins. The market stands at about 7 florins per double hundredweight. The ring will be a subject of debate in the Reichsrath and the Pesth Assembly. All the grain crops are in bad condition this season, and the people are much incensed against the action of the speculators.

In 1885 Great Britain imported 61,453,801 cwt. of wheat, and the United States furnished 24,278,719 cwt. In 1886 her total importations were 47,404,344 cwt., and the United States sent 24,620,220 cwt. In 1887, out of 55,784,685 cwt. America sent 30,504,526 cwt. Thus in 1885 the United States furnished Great Britain 39 per cent. of the wheat grain she imported, in 1886 the proportion was 54 per cent. and in 1887 it was 54 per cent. The British East Indies furnished 19 per cent. in 1885, against 23 per cent. in 1886 and only 15 per cent. in 1887.

It is reported that wheat smuggling is carried on constantly and successfully along the whole of the French frontier, from Dunkirk to Marseilles. The plan is to build large barns on the very edge of the frontier, and in close proximity to farms on French soil. A close watch is kept on the custom-house officers, and as soon as they are out of the way, the wheat stored in the Belgian barns is quietly transferred to the French farms and thus escapes the payment of duty. It is estimated that the annual loss to the French government by this practice is from eight to ten millions of francs.

Crop news from the Continent is: In Germany complaints are heard about rye. Advices from Southern Russia continue to speak favorably of the crop prospects on the banks of the Dnieper, so famous for Ghirka wheat—an abundant harvest is expected in Kiev and Podolia. Late advices from New Zealand state that the test of the threshing shows that the anticipated yield of the wheat crop has been over-estimated by 25 per cent. The hot dry weather and the fierce northwest winds in January, when the wheat was in bloom, must have caused an incalculable amount of damage, and although the quality and condition of this season's grain is unexceptionable, the yield per acre is the poorest for many years. Eight ships were being loaded with wheat for the United Kingdom. Australia has a wheat crop that allows of 10,000,000 bushels surplus for export.

A few days ago at Duluth, Minn., the steamer *Mont Eagle* was made fast at the dock adjoining a grain elevator, receiving spouts from which were adjusted to the vessel, 50,200 bushels of wheat loaded into her, and she was away from the dock again in just forty-nine minutes.

THE EXCHANGES.

Tickets of membership in the New York Produce Exchange have been selling at \$1,250 and \$1,275.

The New York Produce Exchange will close at 2:15 from June 15 to Sept. 15, and open Mondays at 11 A. M.

The bucket-shop proprietors in Montreal have taken legal opinions as to the operation of the bill against them, and a plan has been prepared which enables them to transact business without coming under the provisions of the act.

Business is exceedingly dull on the New York Produce Exchange, and but little trading is done, except among the scalpers. The depression is believed to be only temporary, and the traders are waiting patiently for something to turn up.

The directors of the San Francisco Produce Exchange Call Board, acting on a petition to set a figure upon grain bags, or more properly speaking, upon grain big contracts, for marginal purposes, have fixed 7½ cents as the point beyond which all margins collected must at the request of either party to the contract, be deposited in bank.

The Philadelphia Board of Trade has established a court of arbitration for the prompt settlement of business disputes. A judge has been appointed, and the parties to any controversy may submit it to him alone, or may each select an arbitrator, who together with the judge shall constitute the court. In either case the decision of the tribunal is to be final and without appeal.

The bucket-shop bill recently passed in the Canada Parliament became a law May 22, and the *Toronto Globe* says it has had the desired effect in that city. It was feared that the law might interfere with the business of legitimate brokers, but the only effect will probably be the cutting off of a certain amount of speculation in small quantities of wheat and pork in the Chicago business.

At the regular meeting of the Baltimore Corn and Flour Exchange, held June 11, the by-laws were amended by the adoption of a rule to the effect that on and after July 2, wheat sold for future delivery unless otherwise specified, shall be known as contract wheat, and upon such sales the seller shall have the right to deliver No. 2 red winter wheat, or No. 1 hard spring wheat, Baltimore inspection, at same price.

A proposition has been advanced recently for strengthening the value of seats in the New York Produce Exchange, which is creating considerable discussion. It is proposed, in order to absorb two or three hundred floating tickets, whose presence in the market acts depressingly on the membership values, that any member may have the right to own two memberships upon which he shall pay double assessments, etc., and upon each of which his estate shall collect a separate gratuity. The younger members of the Exchange, who are members solely for trade purposes, are opposed to this plan.

The St. Louis *Merchant Miller and Manufacturer* is concerned over the fact that for some years the memberships in the Merchants' Exchange of that city have been declining in value. It numbers 3,300 members, among them many business men of ability, but so far no active measures have been taken to put new life into the organization. The plan heretofore pursued of transferring the certificates of deceased members to new applicants is condemned as absurd, and a better way suggested by retiring the certificates of deceased members, the money to be forthcoming from the members pro rata. By this means it is thought that but a few years would elapse before the demand for certificates would exceed the supply.

An exchange says: A number of brokers in Chicago, Duluth and New York have added to their incomes by taking advantage of a ruling of the New York Produce Exchange, to the effect that all wheat contracts, unless otherwise specified, could be filled by No. 1 hard wheat. Large amounts of this quality were bought last autumn at Duluth, which are now being delivered buyers at the highest market price. As freight rates have decreased 3 cents per bushel from Duluth to New York, the profit on transactions of this nature has been great. As much as 7 cents per bushel has been realized, although the average was not more than 3 or 4 cents. This was not inconsiderable in a time of stagnation such as last winter.

The Baltimore Corn and Flour Exchange has just issued its thirty-third annual report. From this it appears that the condition of the trade during the past year has not been a very flattering one. The export of American wheat has been considerably less than in previous years. Among the causes given for the reduction are the increasing exports of flour, especially to England, thus causing a diminished demand for grain from the English millers, and the disastrous wheat corners of last year in Chicago and San Francisco, which advanced prices in an unhealthy manner and affected both legitimate and speculative trade, and ruined many of the smaller traders and exporters. The report speaks in high terms of the enterprise of Baltimore millers in keeping up with the many improvements in milling methods. The financial condi-

tion of the Exchange is all that could be desired. The Inter-State Commerce Law is condemned in strong language, especially the new system of billing through from Western points to Europe, which, it is asserted, works injuriously to the local interests of all Eastern distributing points.

The New York *Produce Exchange Reporter* says that the old question of gratuity system obnoxiousness has been revived again upon 'Change by the outspoken criticisms of representative members who have hitherto refrained from assuming a publicly hostile attitude to the fund. A new plan has been proposed, according to which all members will be made equal in receipts from, as well as payments to, the gratuity fund.

WATERWAYS

The present depth of water in the Soo Canal is 14 feet 4 inches.

The "Black Sea and Azof Canal Company," with a capital of \$17,000,000, are about to begin cutting a canal across the Crimean isthmus.

Mary A. Jamison, owner of a canalboat, has secured a verdict of \$304 against Jay Gould, for damage caused to her boat by the yacht *Atlanta*.

Grain freights are lower at present than ever known in the history of the trade. It is stated that wheat can be shipped from Chicago to Liverpool at 6¼ cents per bushel.

Gov. Hill of New York has signed the bill appropriating \$570,000 for the improvement of the state canals. This is a little over one-half of the amount originally called for in the bill.

The Ottawa, Ont., House of Commons has appropriated \$1,000,000 for a new canal at Sault Ste. Marie. The government's estimate was \$2,800,000 for a 16-foot canal, and \$3,800,000 for a 20-foot canal.

Surveys have been made for a ship canal from the San Joaquin River to Fresno. It will be of sufficient size to carry stern-wheel steamers that will run direct from San Francisco. The cost is estimated at \$3,000,000.

The experiments in substituting locomotives for horses along the Shropshire Canal, England, have been a fair success. The rails were laid eighteen inches apart. The engine drew eight laden boats at the rate of four miles an hour.

The St. Lawrence canals are suffering from low water. This is especially the case in the Cornwall Canal, and it is alleged that manufacturing establishments are drawing the water from the canal to move mill machinery. The government is investigating the matter.

Grain comes into Chicago in canalboats over the Illinois & Michigan Canal, and is transferred from the boats to the lake vessels. For this the elevators receive one-half of a cent a bushel. Under the McEvoy Bill the New York and Buffalo elevators will receive for the same work five-eighths of a cent per bushel.

Canadian contractors say they doubt if anything will be done toward the construction of the Sault Ste. Marie Canal, although it is stated the Government will soon call for bids for the work. They think the proposal is a scheme to frighten the United States in case the fishing question is not settled satisfactorily.

The report on the traffic at the "Soo" in 1887 states that the saving by the availability of the water route last season, is estimated at \$34,557,140. This represents more than ten times the cost of improving the canal and St. Mary's River to the present time, or four times the cost of all improvements made, or to be made, between Lakes Superior and Huron.

The *Canal Advocate* thinks there ought to be no particular uneasiness in regard to the present low canal freight on the Erie Canal. It advises the boatmen to take all the business they can get, even at very low figures, as the railroads are sure to capture all that is offered in a dull time. It is better to be moving at a 3½-cent freight and a 60-cent up load, than to lie in port one or two weeks for an uncertain 5-cent freight.

The annual meeting of the Chesapeake and Delaware Canal Company was held Monday. For the year ending May 31, 1888, the revenues received from tolls were \$190,089 75, and from other sources \$6,243.03, a total of \$196,332.78. The expense of maintaining the canal was \$54,206.08, and the interest on the mortgage loan of \$2,602,950, at 5 per cent., was \$130,147.50, a total output of \$184,353.58, leaving a surplus of \$11,979.15.

A bitter legal fight is in prospect at Wabash, Ind. The Cincinnati, Wabash & Michigan Railroad has long been negotiating for the right of way down the towpath of the old Wabash & Erie Canal, to enable it to lay a switch to reach the manufacturing district of the city. The canal property is owned by the Wabash Hydraulic Company, which is holding the land in the expectation of selling it to a trunk line which may some day be built parallel to the Wabash. Recently the C., W. & M. made an offer of \$1,050 for the right of way along the towpath through

the city limits, which the Hydraulic people refused, and the railroad company is now surveying a route through the business center of the city, and will immediately begin condemnation proceedings to secure possession of the land. It will be a long and bitter fight, as the Hydraulic Company will contest the suit to the end.

The Buffalo *Courier* says: "A new canal steamer named the New York World, has arrived from Lockport. She was built by Hall, for Capt. Charles Ockerman of Binghamton, and is one of the best and strongest boats yet turned out. Her cost is \$6,500. She has a propeller wheel and will have three consorts—pushing one and pulling two. Her capacity is about 7,000 bushels of wheat. Capt. Ockerman will run the World himself. A man ought to have something in the world to enable him to carry wheat to New York via canal and river, 500 miles for three cents per bushel.

The Dingley resolution has been adopted by the House. This resolution calls upon the Secretary of the Treasury, for information as to whether an order is now in force by which United States vessels passing through Canadian canals to American ports, when they make their voyage via the St. Lawrence, pay less tolls than when they make it by way of Lake Ontario, and whether further legislation is necessary to authorize the Secretary to impose additional tolls upon vessels passing through the Sault Ste. Marie Canal bound to Canadian ports, in case Canada continues her discrimination against vessels bound to American ports.

The chartering of grain vessels prior to arrival is a not unusual practice on the Pacific coast, although it generally results in financial loss to the charterers. It is said these losses have in the past five years amounted to hundreds of thousands of dollars. Two iron ships lately arrived at San Francisco under charter to carry wheat to Europe, one at £1 12s. 6d, and the other at £1 10s. Both of these involve a loss to the charterers. The higher-priced one has been re-engaged at £1 1s. 3d., indicating a loss of over \$5,000 to the original charterers. If others have been engaged at corresponding rates for the new crop, it will mean considerable loss, as foreign rates will probably be much lower than they were some months ago.

Through the influence of Senator Cullom the Senate Commerce Committee has inserted amendments in the River and Harbor Bill providing for the survey of the Illinois and Des Moines River route for the lakes and gulf waterway, and requiring the Secretary of War to locate the route for a canal from Lockport to Chicago with a capacity of 600,000 cubic feet a minute at two miles an hour. This amendment provides that the expense shall be paid out of the \$200,000 carried in the bill for the improvement of the Illinois River, so that there will be nothing added by it to the aggregate of the bill. He has also secured an amendment requiring the Secretary of War to locate the Hennepin Canal, and report to Congress suitable plans and detailed estimates of the cost of the improvement. No additional appropriation for this will be needed now, because a sufficient amount was left over from the appropriation for the survey of canal routes which Gen. Logan secured in 1882. Senator Cullom has accomplished the purpose for which he went on the commerce committee.

The canal store is a peculiar institution. It differs from any other kind of store in the country, but it resembles most some of its trade brethren in fishing villages or lumber camps. Its stock in trade embraces a wide range of goods. There must be, of necessity, everything that is of use on the boats—tools for all purposes, articles of food and clothing, harnesses, horseshoes and all kinds of horse necessities, medicines and liniments, butter, paints, fishing tackle, canned goods, furniture, stove griddles and implements, sawdust for bedding, wood for fuel, tied up in bundles or piled in little "jags," ropes and lines, vegetables, candy, bottled drinks, stationery, a little jewelry, groceries of all kinds, ice, tobacco, books and illustrated papers, hams, fiddle strings, kerosene oil, bread, mule whips, milk, shoes, buttons, nails, gangways, calico, perfumery, oat straw, rubber boots, oilcloth coats, and, for all we know, bustles and balloon jibs are mixed up in a mass to tempt the purchaser. The ham and the horse collar hang together outside and swing gently in the breeze, while the red shirt and a string of straw hats flap gleefully and cheerfully hailing the attention of the boatman coming afar off.

THE PLAGUE OF LOCUSTS.

The seventeen-year locusts have made their appearance in Illinois in the vicinity of Wheaton in great numbers. While they do not molest the fruit or grain, they are very destructive to the trees, devouring the leaves and killing young and tender trees by making incisions in the bark, in which they deposit their eggs. These insects come up out of the ground between February and June, according to the climate, and remain about six weeks, during which time they lay an immense number of eggs. They then die, and in about six weeks or less the eggs hatch out, and the larvae descend about two feet into the ground and subsist on the juice of roots. The last time these locusts were seen in Illinois was in 1871, the year of the Chicago fire. In Iowa, also, they are reported to be coming up out of the ground in great numbers, the first time they have appeared since 1869. In Muscatine county there are said to be millions of them, but no great damage has yet been done. Minnesota has plenty of grasshoppers, but no locusts as yet.



Soap from cotton-seed oil is the latest Atlanta enterprise. This is no lye.—*Divie*.

The receipts of grain for June 1 and 2 at Buffalo were 800,000 bushels, and of flour 60,000 barrels and sacks.

The wheat crop of the Red River Valley, Northern Dakota, and Minnesota is estimated at 50,000,000 bushels.

The June crop report for Michigan asserts that the wheat crop will probably amount to but 16,450,000 bushels.

A total export of 120,000,000 bushels of wheat (including flour) will be reported, it is said, for the year ending July 1, 1888.

During the last twenty days of May there were shipped from Duluth 3,984,048 bushels of wheat, 57,311 bushels of corn, and 150,000 barrels of flour.

Corn exports from the United States for ten months ending April 30 were 26,195,000 bushels, against 34,987,000 bushels for the same time last year.

Col. Edward H. Castle, who came to Chicago May 1, 1839, is said to be the man who shipped the first 100,000-bushel lot of wheat ever sent from Chicago to New York.

Prospects for corn in Georgia are encouraging, except in the lowlands. Oats will be an average yield in most parts of the state. Wheat has been seriously injured by rust.

A sample of rye has recently been exhibited in Chicago grown in Germany. It is clean and even, but thin, and weighs only about fifty-four pounds to the measured bushel.

One of the effects of the suspension of the bucket shops in Montreal will be, it is said, a curtailment of about \$130,000 in the earnings of the telegraph companies.

A "corn palace" train is to be sent from Sioux City, Ia., to the National Republican Convention at Chicago, June 19. The delegates will help Allison, and at the same time boom their city.

The corn crop of 1887 for Illinois was 129,537,603 bushels, the smallest that has been produced for nine years, and the amount in first hands on May 1, 23,573,279 bushels, is but 18 per cent. of the crop.

A Chicago paper says it is believed, in the oats crowd, that a single house controls the old crop deliveries of that cereal, and the shorts will be well squeezed before the summer is over, unless something unforeseen turns up.

Merriman—Did you hear that the locks and canals company had threatened to bring suit for damages against the Vesper Boat Club? Graves—No! is that so? What have the boys been doing? Merriman—Pulling up the river.

The report of the Ohio Agricultural Department, for June, puts the condition of the wheat crop in that state at 58, and represents a large percentage of the wheat as being so short that it cannot be gathered even with the use of twine binders.

A gentleman was complaining on 'Change that he had invested a rather large sum of money and lost it all. A sympathetic friend asked him whether he had been a bull or a bear, to which he replied, "Neither; I was a jackass."—*New York Globe*.

The big grain elevator which is being constructed by the Fitchburg Railway Company at Rotterdam, N. Y., will be completed by July 1. The structure will contain fifty bins of 10,000 bushels capacity each. The cost is estimated at \$125,000.

There are seventeen glucose factories, generally located in the corn-growing states. They represent \$11,000,000 invested capital, and manufacture 670,960,000 pounds of glucose, worth \$17,128,800. They consume about half as much corn as the distilleries.

Gophers are very destructive to newly-sown grain. One was recently captured in an oat field, and on examination 177 grains of oats were found stowed away in his chops. The seed was preserved and sown by itself to find out what the yield would be.

Millions of grasshoppers have hatched out in Otter Tail county, Minn. They are of the genuine Rocky Mountain variety which did such damage in Minnesota a year ago. Four carloads of material have been shipped to the place to be used in an endeavor to destroy the pests.

Henry Ward Beecher, who at one time essayed his hand at amateur farming, and found he was not quite so successful at it as at preaching, claimed to have solved the problem of getting rid of the Canada thistle. He said: "The only way to exterminate the weed is to plant it for a crop and propose to make money out of it. Then worms will gnaw it, bugs will bite it, beetles will bore it, spiders

will web it, birds will peck it, heat will scorch it, cold will freeze it, rains will drown it, and mildew and blight will cover it."

COMPARATIVE VALUE OF OATS AND CORN.

Very pertinent in treating of oats is a comparison of values on other feeding stuffs. Taking prices in a number of markets in the interior and at the seaboard, on May 1, 1887, and May 1, 1888, we find corn risen from 41 cents to 58 cents, an advance of 17 cents per bushel, or 41 per cent.; timothy hay from \$11 to \$15, an advance of 36 per cent.; bran from \$15 to \$17, an advance of only 13 per cent., and attributable, no doubt, to the large quantities, free milling, and low prices of wheat. Timothy seed from \$1.75 to \$2.60 and Hungarian seed from 70 cents to \$1.05. Seeds are advanced about 50 per cent. from a demand to repair loss and damage to meadows.

The average price of oats to corn in May for a series of years has been 71 per cent. The relation on May 1, 1888, was but 59 per cent. In but one year in the six years given, have we had so low a percentage in May, and that was an equal percentage in 1884, when corn was high from manipulation.

A percentage of 59 against an average percentage of 71, denotes that oats are 7 cents per bushel cheaper than they would be if occupying a relation heretofore borne. With corn at 55½ cents in Chicago, oats should be about 40 cents in that market.—*Daily Business*.

FARMERS' ELEVATORS.

The convention of farmers of Dakota and Minnesota, which met in Fargo, Dak., May 22 and 23, was well attended. President Smith Stimmel presented the object of the call, laying special stress on the importance of the farmers holding their wheat on the farm instead of hauling direct to the elevator, as is the custom. A discussion on this subject followed, in which Mr. Burrows of Grandin stated that the farmers who sold through the farmers' elevator at Grandin (recently burned) had discovered that they had saved from 10 to 12 cents per bushel, enough to build an elevator every year if necessary. Resolutions were passed to the effect that it is the duty of Congress to appoint a special committee of investigation to look after any combination or trust which has for its object the increasing or decreasing of the price of any article of commerce above or below the price paid for the same in the open markets of the world; if such trust be proven to exist, it shall be the duty of Congress, if the tariff tax protects the manufacturer of such articles, to repeal the law and put said articles on the free list; also indorsing the Territorial Farmers' Alliance of Dakota. President Stimmel, among other suggestions in regard to permanent organizations, made the following: "We also recognize the alarming fact that under our present system of marketing our wheat we sustain a loss of from 16 to 20 cents per bushel on every bushel of No. 1 hard-grown on Dakota soil, aggregating a loss of millions of dollars annually to the farmers of Dakota, and hence we recommend that the farmers of Dakota and Minnesota inaugurate a system of farm storage by building granaries and elevators in their own immediate control along the lines of railroads in Dakota and Minnesota, that thereby we may secure the true market value in the sale of our superior quality of northern grown wheat."

It was given as the opinion of the convention that it was the duty of the farmers of Dakota and Minnesota to join the Farmers' Alliance.

COMMISSION CHARGES AT BALTIMORE.

The directors of the Baltimore Corn and Flour Exchange have adopted the following rules, governing commission charges and rates for carrying and storing consignments, also interest on advancements, to take effect June 1, 1888:

Sec. 1. The following rates of commission charges for receiving, selling and accounting for the various kinds of property herein named, being just and reasonable, are hereby established as the minimum charges which shall be made for the transaction of the business hereinafter specified, by members of this association.

For selling wheat, rye and oats, one (1) cent per bushel.

For selling corn in elevator, one-half (½) of one cent per bushel.

For selling corn otherwise than in elevator, one (1) cent per bushel.

For selling bran, shorts, chop and mill feed, one dollar (\$1) per ton.

For selling hay and straw, one dollar (\$1) per ton.

In addition to the foregoing specified rates of commission, there shall be charged the legal rates of interest on all advances, whether made on bills of lading or otherwise; also established rates of storage and insurance upon all merchandise held in store or otherwise carried. No rebate, drawback, brokerage or allowance of any kind shall be made to consignors, directly or indirectly, or through any other party or parties. Nothing in this article shall be so construed as to prevent any higher rates of commission from being charged.

Sec. 2. If a member, firm or incorporated company, accused of violating this article, shall, when demanded, refuse to submit such records or memoranda in his, their

or its books, correspondence, etc., as may have reference to the specific charge or charges of which such member, firm or incorporated company shall stand accused, to the board of directors of this association, or to a special committee thereof, for their examination or investigation, such refusal shall be accepted as *prima facie* evidence of the truth of the accusation.

When any member of this association shall be found guilty by its board of directors of violating any of the provisions or requirements of sections 1 and 2 of this article, he shall for the first offense be suspended from all the privileges of membership in the Baltimore Corn and Flour Exchange for not less than one year; and for the second offense he shall be expelled from the said Baltimore Corn and Flour Exchange.

THE REPEALED CORNER RULE.

The following is the anti corner rule which was repealed by the Chicago Board of Trade on May 21:

Section 10. If, during the progress of any arbitration or other investigation before any committee of the association, it shall appear to the satisfaction of such committee that any member of the association has been guilty of manipulating market values, as a basis for extorting unreasonable and unjust damages, or for the purpose of avoiding payment of just obligations, the said committee shall thereupon make formal charges to that effect against the member thus implicated to the board of directors. The member thus charged shall be promptly summoned to appear before the board of directors for an investigation of the charges; and if the charges are successfully prosecuted by the committee, and the member is found guilty, he shall be expelled from the association, if so determined by an affirmative vote of at least twelve members of the board of directors.

THE CORN BELT.

The seven states known as the "corn belt" are reported by the Agricultural Department to have produced a corn yield for 1887 and 1886 as follows.

States.	1887. Bushels.	1886. Bushels.
Ohio.....	73,800,000	96,200,000
Indiana.....	71,400,000	119,795,000
Illinois.....	141,000,000	209,818,000
Iowa.....	183,000,000	198,847,000
Kansas.....	76,550,000	126,712,000
Nebraska.....	93,150,000	106,129,000
Missouri.....	141,000,000	143,709,000
Total.....	779,900,000	1,069,210,001

The aggregate crop of these states for the two years including 1886 and 1887 was 1,780,310,000 bushels, and for the two years previous 2,415,441,000 bushels. Deficiency for the last two years, 635,131,000 bushels.—*Daily Business*.

GRAIN TRIMMERS.

One of the oldest of the grain trimmers, John Murphy, who has been for thirty years a "grain trimmer" said: "It is true that sometimes we make high wages—\$10, \$12 or \$15 a day. I have made as high as \$100 a week, but you must remember that we generally have to hunt three days for a job that keeps us busy for a day and a half. Then the work is awfully hard, especially on men who don't understand it. There is a dust which rises from the grain, especially from the oats, that is deadly. Most of the men wear a sponge mask while they are working in the holds, to breathe through, but if a man hasn't got very tough lungs he has no business going into this trade."

"You have a union, of course?"

"Oh, of course, and we all belong to the Knights of Labor. We work in gangs together. A foreman has his own gang. He gets the loading of a vessel and gets a man's share for the job. If he works along with the gang he gets a double share. We are paid \$1.50 a thousand bushels, and it takes six men to handle to advantage a cargo of 25,000 bushels. If we could get steady work there is no denying that we could make very good wages."

"What is your average?"

"I can't tell you. It varies from one week to another. If we make \$30 to \$35 we consider it a good week. Most of the men don't make that. It depends on the foreman getting the work, and on the size of the cargo. We can handle a cargo of 30,000 just as easy as one of 25,000."

"Where does the skill come in?"

"In making the vessel draw just the amount the captain wants. Sometimes we have to start up the river and put in a certain amount, then take the boat down and put in more, and finally take it to the central elevators and put in the rest, because any other way of loading would stick the vessel fast up the stream. For instance, there is the largest barge that sails on fresh water," pointing to the Aurora across the river, "she is chartered to take 150,000 bushels of oats to Buffalo, but they can't put it all in there."

"How many men are there in the Grain Trimmers' Union?"

"About one hundred. We'll let you in if you want to come and make some of the big wages. I'd like to see some of you fellows doing the work for awhile, just to rest yourselves."—*Chicago News*.

Press Comment.

BIG SHORTAGES.

A crop of big shortages on corn and wheat is just now coming to the surface. There's a screw loose somewhere, with a three-cent rate on corn and a shortage of, say, from twenty to fifty bushels, a single boat or double trader will likely come in debt. Who is to blame? The weigher is never over-particular, and if the boatmen themselves would be a little more careful, perhaps less shortage would be reported.—*Canal Advocate*.

THE GRAIN "BEAR."

He it is who welcomes the gentle rain in the spring time and rejoices when the parched earth is watered and gives promise of luxuriant harvest. He prays that the farmer may raise abundant crop and his chief desire is accomplished when the poor and needy people of the world are enabled to buy much bread with little money. He is pained to hear of destructive storms, of long continued drought, of insect pests and rust in grain, and all the perils and misfortunes which beset the farmer's life are perils and misfortunes doubly felt by him. If the stock "bear" must be execrated because he is callous to human suffering, then indeed must the grain "bear" be admired and praised for that benevolent spirit whose dearest wish is that food shall be plentiful and cheap.—*London Truth*.

'SPOSIN'.

Suppose the farmers of Nebraska, Iowa, Illinois and Kansas should in secret agree on a certain year to plant only a third of a crop of corn, and should give their secret agent secret instructions to purchase quite a number of millions of bushels of July corn on the Chicago market. After this purchase let their intention be advertised, and the July corn would mount toward the zenith. Why, they could sell out for more money than they have made in raising corn in twenty-five years. And where would the Chicago gambler be? In articulo mortis. The next year the farmers of these states would agree to plant all their land in corn; and then they could sell corn short on the Chicago Board. What few suckers were left over from the year before would then adorn the hooks and lines of the Farmers' Trust.—*Omaha World*.

IN FAVOR OF TRUSTS.

A vast corporation that can handle the products of the fields cheaper and more expeditiously than is done now is a step in the right direction. Corporation and co-operation differ only in one letter, and the spirit of the age pushes resistlessly in the direction of the latter. There are, however, two difficulties, vast and almost insurmountable, in the way of ultimate success. How are the farmers going to be organized to such an extent that they will not undersell each other? How is the vast amount of money necessary to pay salaries, build offices, elevators, warehouses, emporiums, and to carry vast amounts of grain to be raised? Some by stock subscription, the larger amount by borrowing against the grain. But if money is borrowed interest will eat up profits, and insurance and storage will still further reduce net returns at the end of the year. Again, should grain be lower in June than in November, what is gained by carrying it?—*Kansas Miller*.

CHICAGO ELEVATORS AND THE INSURANCE COMPANIES.

Usually at this season of the year the numerous mammoth elevators of Chicago are filled to overflowing with the millions of bushels of wheat, corn, rye, barley, oats and other cereals, the products of this vast Northwestern territory. This grain is always fully protected against damage and loss by fire, and the insuring of these products brings large sums of money into the coffers of the insurance companies represented here. Considerable complaint is made by underwriters that our elevators are not as crowded as in past years, and that consequently the volume of insurance premiums from this source is much less than in past seasons. The reason assigned for this is not that there is less grain in the country, but that the insurance rates are too high, which induces shippers to send the grain to Milwaukee, Duluth and other places which have elevators, where rates are lower. If this is a fact, it stands the insurance men of this city in hand to investigate the matter and provide a remedy.—*Investigator*.

CAN A CORNER BE RUN?

The recent abolition of the corner rule by the Chicago Board of Trade is supposed by some to have rendered it more easy to run a corner now than formerly. Possibly this forms the chief reason why those who are always trying to guess out the future of the markets are predicting a corner in wheat for this or next month, or perhaps both. The recent trading is much more certainly indicative of the existence of a scare than that the thing feared is actually on the carpet in the wheat pit. Still, it would not be difficult to engineer such a movement with far better chances of success than attended those of the men who essayed to control the market in the early part of last summer. The stocks at principal points of accumulation in the West are much smaller now than then, apparently the reserves in the hands of farmers behind them are reduced almost to a minimum, and what is yet held in the country would be parted with sparingly because of the poorer prospects for the coming crop, both east and

west of the Rocky Mountains. The frightened ones know all this, and also know enough of human nature to be aware that the big speculators cannot be trusted to let such an opportunity slip by them unimproved. The rumor that Cudahy is enlisted for a bull movement, seconded by Armour and Plankinton, and to be tailed in after by several others, may be made up out of whole cloth for anything that is yet ascertained to the contrary. It would be no great wonder if the market should exhibit a little strain in the upward direction, after having been the subject of a corner by the bear interest during nearly every month in the last four years, the only exception being furnished by the advance which culminated twelve months ago. The one great reason for thinking that the present scare will not be followed by a corner worthy of the name lies in the fact that the big shorts appear to have already taken the alarm and "rushed to cover."—*Chicago Tribune*.

SHIPMENTS OF GRAIN VIA NEW ORLEANS.

Since the opening of the mouth of the Mississippi the transportation of grain to Europe by way of New Orleans has greatly revived. For ten years previous to 1877 the entire shipment of grain from that city was only 1,000,000 bushels for the entire period. In 1880 there were 4,000,000 bushels shipped. We have no data at hand for the shipments since that period, only knowing that the increase has been rapid. The freight is less from the river towns to Liverpool by way of New Orleans than by rail to New York and then to England. There has been considerable comment on the risk run in taking the grain from a comparatively cold climate into the South, and then across the ocean. Theoretically it is unsafe, but as a matter of fact, when properly handled, grain does not seem to suffer by the trip. Again, much of the grain sent by way of New Orleans is grown south of the Ohio and does not suffer an excessive change. Grain stored in the North during the winter retains the cold in large bins as ice does in ice-houses. A red-hot poker plunged into a bin of grain which was stored during an excessively cold spell when withdrawn quickly was covered with hoar frost. When such grain is exposed to summer air each kernel will condense moisture upon it. Such grain might suffer from shipment through the South, though with care trouble is avoided.—*The Millstone*.

FIGURES IN THREE STATES.

The *Indiana Farmer* contains the following resume of its correspondents' reports of the condition of crops and farm animals in the three Central Western states. The figures are the per cent. of a full crop and perfect condition:

	Indiana.	Ohio.	Illinois.
Oats.....	88	88	84
Clover.....	61	70	41
Timothy.....	81	79	68
Apple.....	88	94	72
Peaches.....	89	81	94
Rye.....	81	81	71
Barley.....	78	67	..
Horses.....	91	93	84
Cattle.....	91	89	79
Hogs.....	91	88	83
Sheep.....	95	88	90
Wheat.....	50	55	48
Corn.....	89	91	86
Corn, per cent. average crop planted.....	105	99	103
Flax, per cent. of crop sowed.....	72	52	75

THE KICK OF THE ELEVATORS.

The Buffalo and New York elevator combinations both claim that they cannot afford to discharge and load grain cargoes at the price fixed, that they will have to go out of business, and that such action will ruin the canals while diverting the entire business away from the canal terminal cities. The picture that they draw of the results of legislative interference with monopoly greed and extortion, is distressing; it is harrowing, or would be if it were not so old, so bald from age, so monotonous and so wearisome. The public has heard it ever since it was proposed to regulate by law the corporations created by law, doing business under the protection of law, and exercising corporate rights granted by the public. The same clamorous protest came up from the railroads when the legislatures of the various states first began to inquire into their charges and other practices, and to enact statutes for their supervision. They threatened to "stop business," but they have never stopped, except when strikes or snow blockades compelled them to stop. The Chicago Gas Trust declares that it cannot afford to, and will not, furnish gas for a dollar a thousand. All monopolies, when they first feel the hand of the law cry out against its heaviness, oppression and cruelty.

But they do not go out of business in accordance with their menaces. They first try to resist the law, until the courts enforce its mandates. They then try to evade its provisions till they are caught at it, and compelled to desist. They then seek to compromise, and that is their best policy, for compromises are often effected, at least temporarily, until better understandings are reached. But, in the end, the law is obeyed; and then the rebellious monopolies find that their resistance has cost them more than it came to, and that they would have been better off without the tremendous expense in money, in popular hostility, and in still more restrictive measures, that their revolts had invoked.—*Chicago Evening Journal*.



Market Reports.

The Chicago Board of Trade is a private corporation and is not under any public duty or obligation to admit persons not members upon its exchange to report prices. It is no part of the corporate business of a telegraph company which it is obliged to perform for the public, to collect market reports.—*Metropolitan Grain and Stock Exchange vs. Chicago Board of Trade and Mutual Union Telegraph Company, U. S. Circuit Court, N. D. Illinois*.

Bill of Lading.

A stipulation in a bill of lading which provides that in case of loss or damage to goods, or non-delivery thereof, the carrier shall not be liable for more than their invoice or cost value, is valid and binding upon the parties, and this, too, without regard to their value at the time of the loss or damage, or their value in the market to which they were in transit, and notwithstanding a jury has found that the carrier's vessel was not in proper condition to undertake the carriage.—*Sherman vs. Inman Steamship Co. Sup. Ct., N. Y.*

Common Carrier.

Common carriers cannot insist upon unusual or unreasonable conditions before receiving freight. A condition that goods carried shall be liable for "arrearages of freight due on other goods of the same consignee or owner," is not unreasonable where the consignee is actually indebted for such arrearages. The fact that one has been in the habit of shipping goods under such conditions does not in itself make goods shipped to him under similar receipts liable for arrearages. Where a consignor has no special authority to make such an agreement, a consignee who has not himself assented to it is not bound.—*Kirkman vs. Philadelphia & Reading Railroad Company*.

Common Carrier and Delivery.

Common carriers deliver property at their peril, for if delivery be to the wrong person they will be responsible to the right owner. It is their duty, therefore, in all cases, to be diligent in their efforts to secure a delivery to the person entitled, and they will be protected in refusing delivery until reasonable evidence is furnished them that the party claiming is the party entitled, so long as they act in good faith and solely with a view to a proper delivery. But it is their duty in all cases to be diligent in their efforts to secure a delivery to the person entitled.—*Baltimore & Ohio Railroad Company vs. Pumphrey, Supreme Court of Maryland*.

Bill of Lading.

Where the general owner of goods, on shipping them to a consignee for sale, obtains from the carrier original and duplicate bills of lading and transmits the original bill to the consignee and transfers the duplicates to a bank, which on the faith thereof discounts a draft drawn on the consignee, the bank acquires a title to the property described in the bill of lading to the extent of the draft discounted by it paramount to the claim of the consignee, having knowledge before parting with value on the faith of the consignee of the transfer to the bank. So held by the New York Court of Appeals in the case of the First National Bank of Batavia vs. Ege et al., reported in the *Central Reporter*.

Bill of Lading—Draft—Discount.

Where the general owner of goods, on shipping them to a consignee for sale, obtains from the carrier original and duplicate bills of lading and transmits the original bill to the consignee and transfers the duplicates to a bank, which on the faith thereof discounts a draft drawn on the consignee, the bank acquires a title to the property described in the bill of lading to the extent of the draft discounted by it paramount to the claim of the consignee, having knowledge before parting with value on the faith of the consignee of the transfer to the bank. So held by the New York Court of Appeals in the case of the First National Bank of Batavia vs. Ege et al., reported in the *Central Reporter*.

Common Carrier.

A railroad company may be compelled by mandamus on behalf of the people, represented by their attorney-general to furnish every requisite facility for carrying passengers and freight, and to carry both in such manner and at such times as the public needs may require. This remedy of the state by mandamus is not affected by the fact that injured individuals have their remedy by action for damages occasioned by the failure of the carrier to perform its public duty, and may be resorted to whenever there is a general partial suspension of the duty of receiving and transporting freight, affecting large numbers of people.—*People vs. New York Central Railroad Company, Supreme Court of New York*.

WATER TRANSPORTATION.

Water transportation, while largely neglected in interior districts, continues to increase largely on the borders of the country. The progress made in the lake commerce of the lake cities has been phenomenal. The receipts of flour, wheat, corn, oats, barley and rye at the ports of Chicago, Milwaukee, Detroit, Cleveland, Toledo and Duluth for 1885 were 239,304,618 bushels. In 1886 they aggregated 253,607,658 bushels, and in 1887, 249,093,748 bushels. Shipments were in 1885, 203,431,671 bushels; in 1886, 210,805,663 bushels, and in 1887, 171,172,628 bushels. The value of articles imported at Buffalo by canal in 1885 was \$19,435,053, and in 1887 was \$30,617,728. The value of exports for the former year was \$28,453,110, and for the latter \$39,191,827. The aggregate receipts of flour and grain at Buffalo by lake was 64,329,230 bushels in 1885, 95,425,790 bushels in 1886, and 104,737,710 bushels in 1887. The records of this port extending back for fifty-two years show a steady increase from 1,239,351 bushels in 1836 to the above-mentioned amount in 1887. The comparisons by decades are below:

	Bushels.
1836.....	1,239,351
1846.....	13,366,167
1856.....	25,753,967
1866.....	53,388,087
1876.....	50,074,648
1887.....	104,737,710

This increase of traffic, however, is not universal, local conditions often bringing about a decrease in trade which should naturally increase. The following table of value of exports from Chicago by lake to Canada for eight years illustrates this point:

	\$3,875,279
1880.....	2,883,238
1881.....	3,973,834
1882.....	25,753,967
1883.....	3,193,850
1884.....	2,493,297
1885.....	1,531,350
1886.....	2,102,336
1887.....	1,589,802

—Financial Critic.

PROHIBITING CORNERS.

So the Chicago Board of Trade have concluded, by a large majority, to abolish the rule prohibiting "corners." A local paper has this to say about it:

"The action is significant, for the reason that a corner in May corn has been among the possibilities, while a corner in July wheat might also occur without surprising anybody. The rule was passed when corners on the Board in one thing or another were frequent. The amendment, however, is the result of a long and unpopular reign by the big short sellers, who have depressed prices continually and gobbled the carrying charges each month. The majority of the Board now plainly want to see somebody get the better of these old time bears, and this revocation of the corner rule is to remove all the obstacles in the way of their success."

But the truth may as well be told. "Rules," whether by Boards of Trade or State Legislatures, prohibiting corners, or any other modern speculative methods, either in grain, stocks or anything else, are about as effective as the Pope's famous bull against the comet.—*New York Produce Exchange Reporter*.

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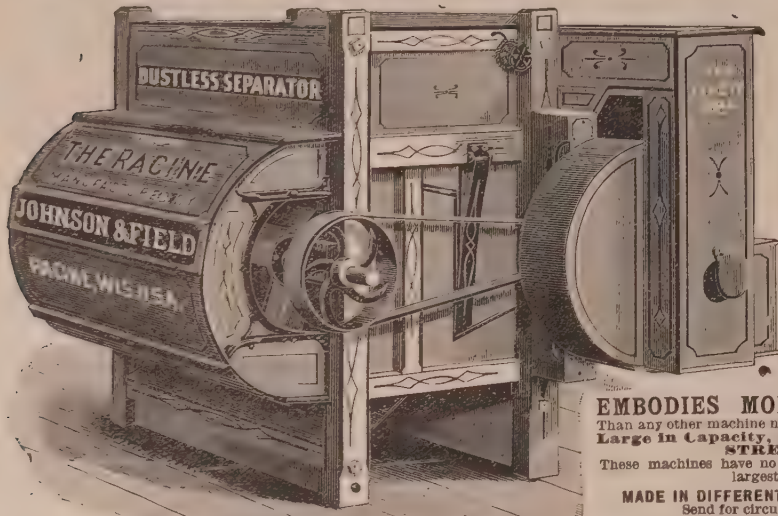
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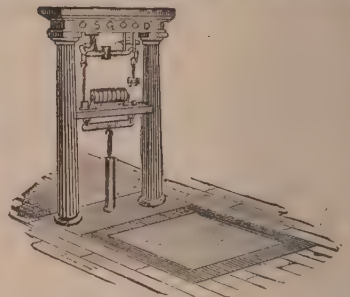
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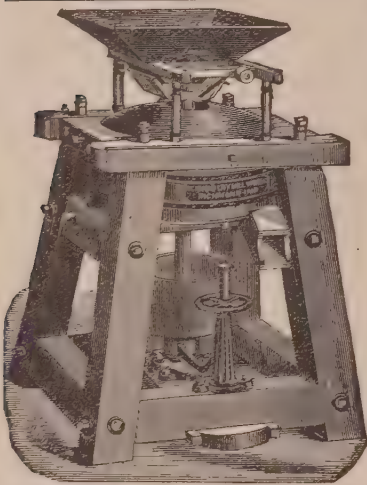
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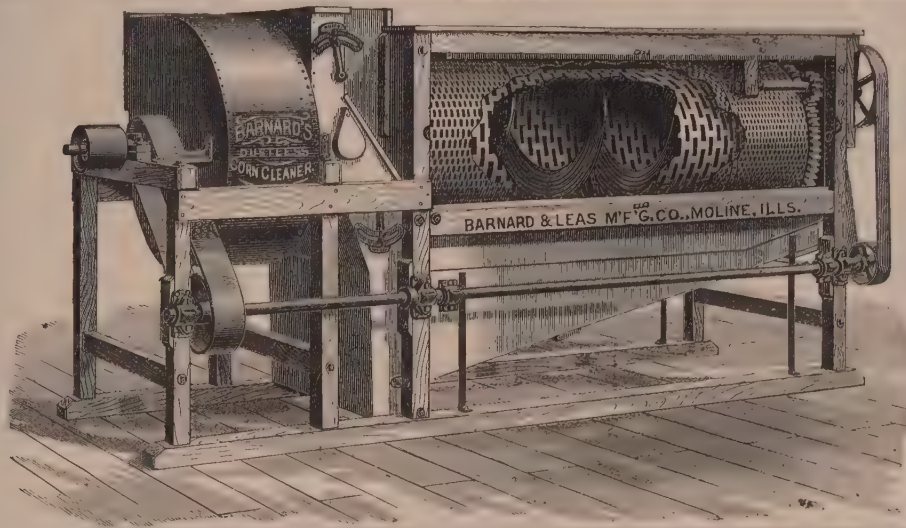
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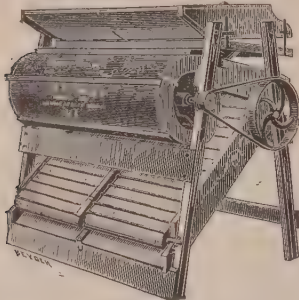
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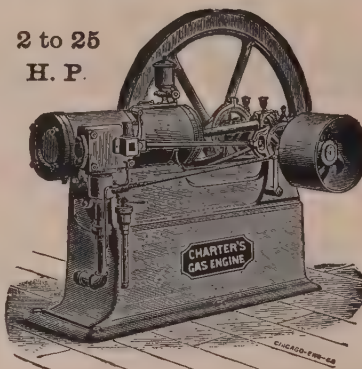
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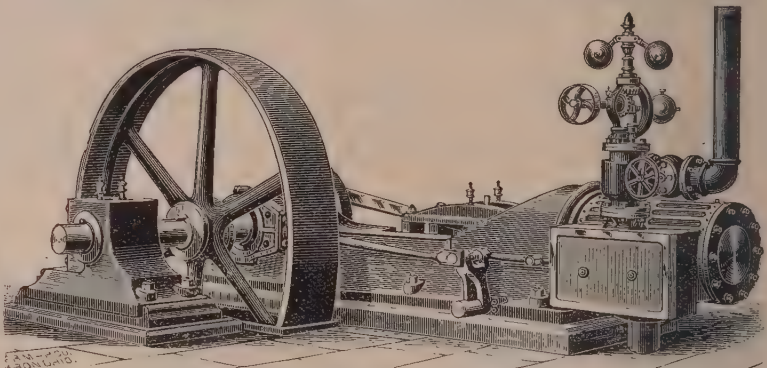
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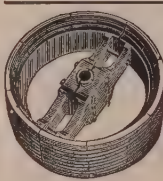
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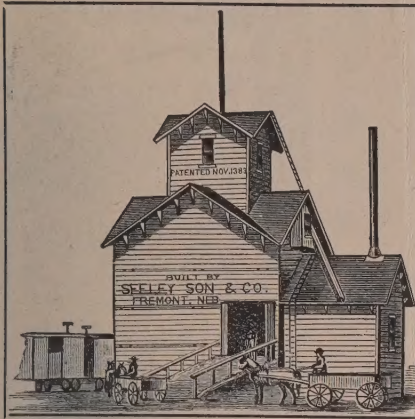
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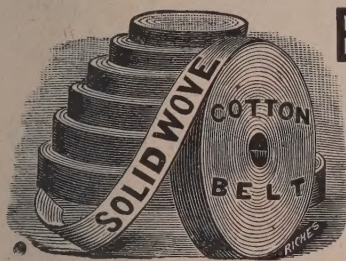
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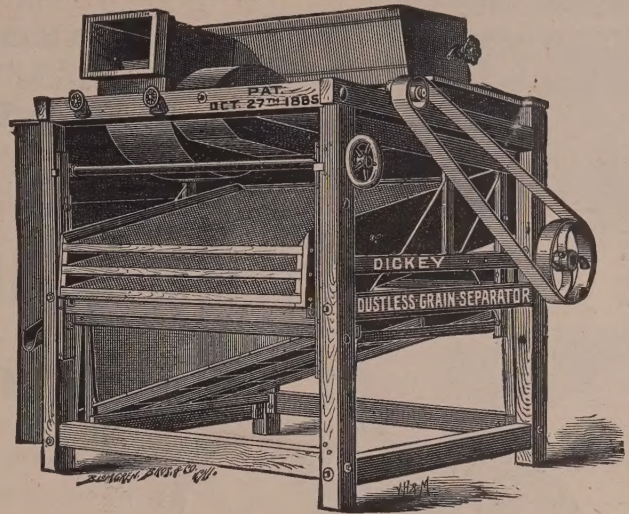
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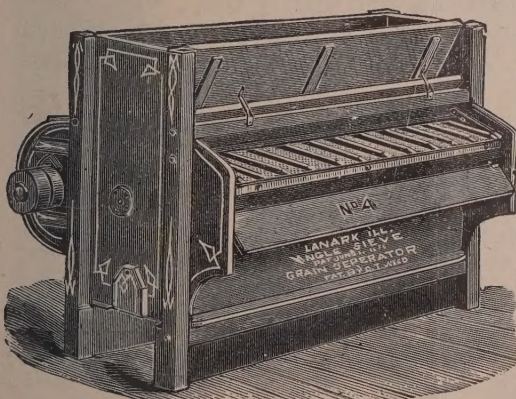
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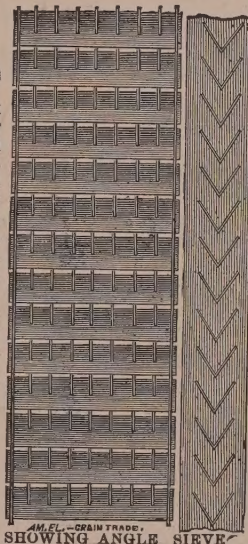


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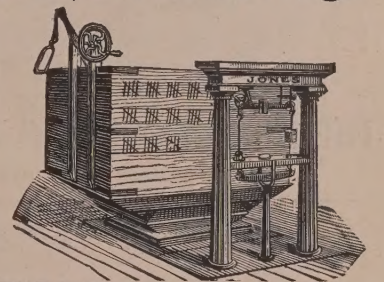
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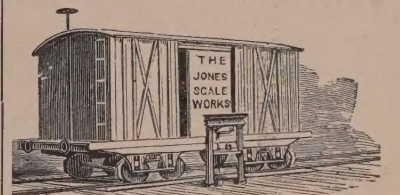


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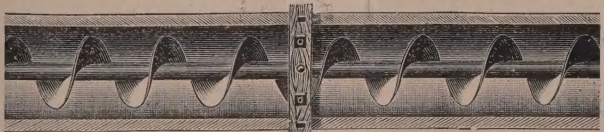
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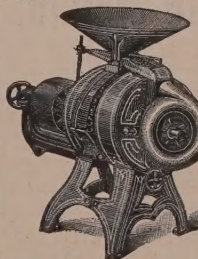
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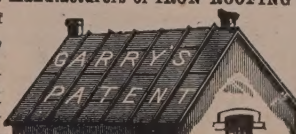
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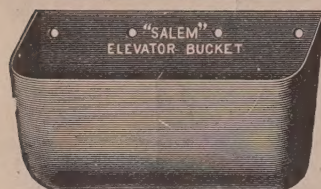
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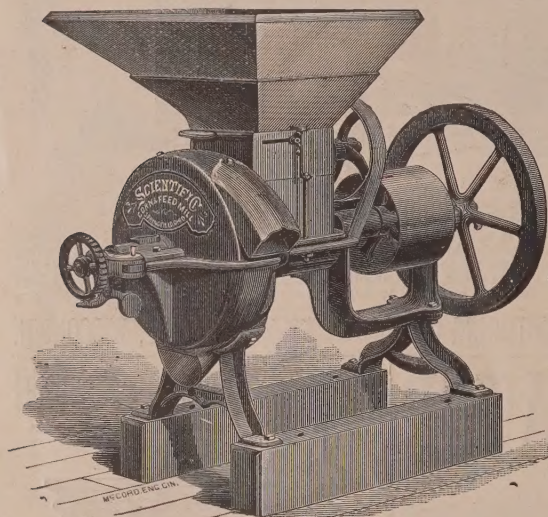
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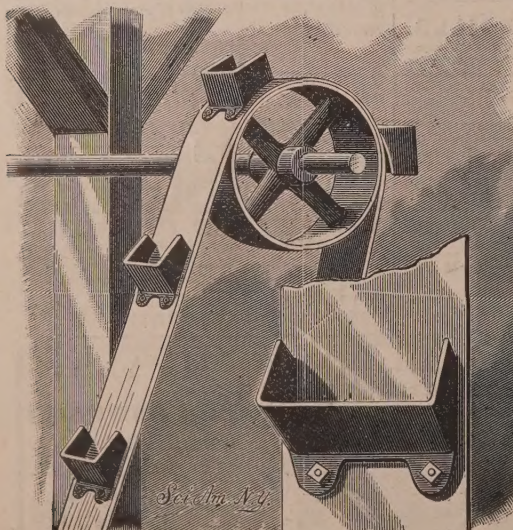
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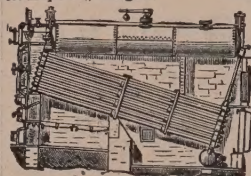
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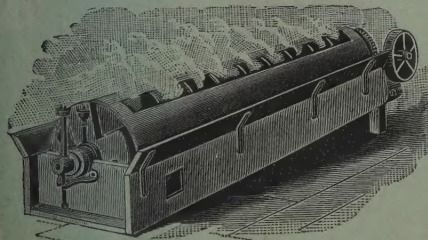
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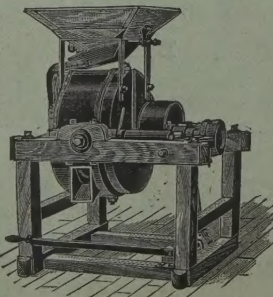
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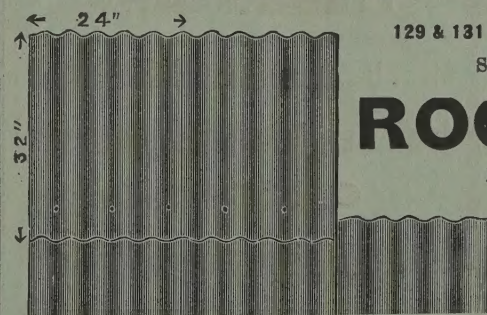
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This cut shows our method of fastening Corrugate
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ROOFERS!

Manufacturers of

**CORRUGATED
IRON**

For Roofing
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DRUID FABRIC ROOFING
***** AND *****
ELASTIC PAINT

For Iron, Metals, Wood, Felt, Etc.

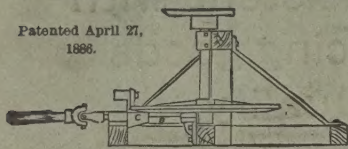
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ANYONE CAN APPLY IT.

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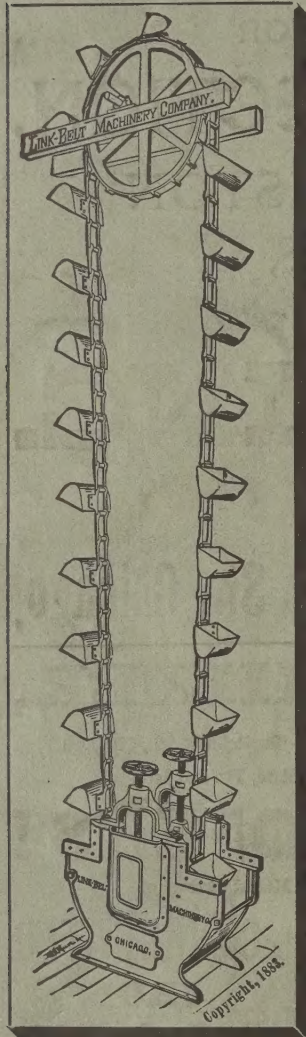
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LESS POWER

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May be **DRIVEN FROM THE BOOT** when desired.

Just the thing for Small Country Elevators.

A LINK-BELT CONVEYOR

requires 25% less power to operate than the Screw Conveyor.

It cleans the trough perfectly.
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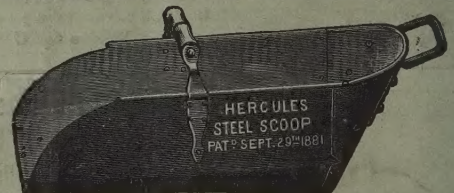
J. H. CHEEVER, Treasurer.

WEBSTER & COMSTOCK MFG. CO.,

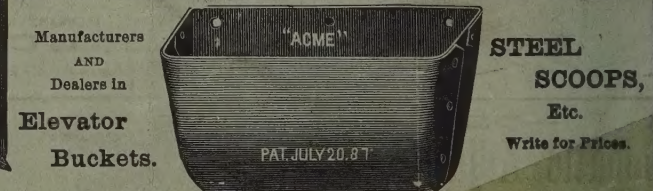
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